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THE UNIVERSITY OF ALBERTA

A MULTI-DIMENSIONAL CLASSIFICATION OF THESES
IN EDUCATION COMPLETED AT THE UNIVERSITY
OF ALBERTA, 1929-1967

by



ALLAN RICHARD BALCHEN

A THESIS

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FACULTY OF GRADUATE STUDIES

The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies for acceptance, a thesis entitled "A MULTI-DIMENSIONAL CLASSIFICATION OF THESES IN EDUCATION COMPLETED AT THE UNIVERSITY OF ALBERTA, 1929-1967" submitted by Allan Richard Balchen in partial fulfilment of the requirements for the degree of Master of Education.

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ABSTRACT

The main purpose of this study was to develop a usable multi-dimensional classification system appropriate for theses and dissertations completed in the School of Education, the College of Education, and the Faculty of Education at the University of Alberta during the years 1929-1967. Seven hundred twenty-four theses and dissertations were abstracted and classified. The abstracts were placed on McBee Keysort cards.

The theses and dissertations were classified according to author, academic degree earned, year of acceptance, area and subject investigated, department in which the research was undertaken, and research design. For the purposes of illustration several analyses utilizing the multi-dimensional classification system were carried out.

The multi-dimensional classification system developed in this study has provided a means of improved access for obtaining information on theses and dissertations in education completed at the University of Alberta during the period 1929-1967.

A number of possibilities for further investigation arising from this study were suggested.

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CHAPTER I

INTRODUCTION

I. IMPORTANCE OF THE STUDY

One difficulty arising from the "knowledge explosion" has been the increasing complexity of information storage and retrieval. In the area of educational research, this problem has become particularly acute. Other fields of study, because of more precise definition of the boundaries of their domain of knowledge, have moved ahead further in resolving the problem of research classification, information storage, and information retrieval. In this study, the view was held that some of the classification procedures developed in such areas as the physical sciences can be modified and adapted to the needs of educational research.

Two attempts have been made to establish lists of all theses in Education completed at the University of Alberta. The first appeared as Abstracts of Theses in Education, 1929-1949¹ undertaken by Dr. H. E. Smith, and the second appeared as Abstracts of Theses in Education, 1949-1958².

¹H. E. Smith, "Abstracts of Theses in Education, 1929-1949" (Edmonton: The Faculty of Education, University of Alberta, 1949).

²C. C. Anderson, "Abstracts of Theses in Education, 1949-1958" (Edmonton: The Faculty of Education, University of Alberta, 1958).

Both works listed theses by alphabetical order of authors' surnames and gave brief statements about each study (annotations in both listings were incomplete). W. D. Knill attempted to bring this listing up to date; in addition, he initiated a classification system appropriate for all theses in Education written at the University of Alberta between the years 1929-1966³. This approach, which may be termed a "visual bibliographic retrieval system", has provided a ready reference for students wishing to survey the local literature in any particular area, as well as an up-to-date listing of theses in the Faculty of Education Library. Inasmuch as this project has been worthwhile and fruitful, it has also served to indicate the inherent weakness of a uni-dimensional classification system--classifying each thesis under one heading exclusively.

The classification system developed in the present study has moved from this initial phase, which has resulted in a "uni-dimensional classification catalogue" of theses, to a multi-dimensional classification of theses--a system whereby theses may be simultaneously classified according to the following dimensions: subject, author, department, research design and year of completion. Such a classification has employed a punched card system--the McBee

³W. D. Knill, "A Classification of Theses in Education Completed at the University of Alberta, 1929-1966" (Edmonton: The Faculty of Education, University of Alberta, 1966).

Keysort System--which utilizes manual sorting. Two major improvements have accrued from this system: (1) a multi-dimensional classification of theses is possible, and (2) abstracts of each thesis have been placed on individual Keysort Cards.

II. THE PROBLEM

Statement of the Problem

The specific problem of this thesis was to develop a usable multi-dimensional classification system appropriate for theses and dissertations completed in the School of Education, the College of Education and the Faculty of Education at the University of Alberta during the years 1929-1967.

Sub-problems

The main problem of the study was broken down into a number of sub-problems on which attention was focused:

1. How is the descriptor language to be formulated and organized?

2. How are the theses and dissertations to be organized or arranged so as to minimize the time needed to search them as well as minimizing the costs of storing or filing?

3. What rules for bibliographical entries and subject description of the theses and dissertations are to be followed?

Significance of the Problem

A classification system has been in use which permits a thesis to be classified once, and only once, under one heading. There are, however, inherent weaknesses in such a system (e.g. forcing a thesis into one class only). A cross-reference system, using a multi-dimensional classification for theses would increase greatly the usefulness of such a list. The educational significance for a multi-dimensional classification system would be:

1. Immediate practical use for graduate students and researchers wanting to survey and research the literature.
2. A quick method for ascertaining trends in local graduate research, areas now being researched, and areas presently lacking research.
3. An experiment in classifying and cross-classifying with a multi-dimensional classification system.
4. A preliminary effort which could develop into a classification of all Canadian theses in education.

III. DELIMITATIONS

1. This study includes only those theses and dissertations completed in the School of Education, the College of Education, and the Faculty of Education at the

University of Alberta during the period 1929-1967.

IV. LIMITATIONS

1. In any classification system, the specification of the system vocabulary and languages and the exact responses required for given inputs and outputs is an acute design problem. Due to the various ways of expression that authors use in conveying information, and that inquirers use in expressing their need for information, the question of words and their meanings arises in the specification of the responses in the classification system.

V. RELATED THEORY AND LITERATURE

Theoretical Framework

There is at present a sizable body of theory which represents a qualitative description of the characteristic features of information storage and retrieval systems. Vickery has summarized and discussed these various theories and theoretical studies.⁴ Many of these theories have been embodied in working systems: control of terminology, the use of categories, hierarchical linkages, correlative techniques, interlocking relations, role indicators. Other theories have been used only in experimental studies:

⁴B. C. Vickery, On Retrieval System Theory (London: Butterworths, 1961).

word associations, weighting, interfixing.

Lutz, Hencley and Evans, in their efforts at developing taxonomies of organizational behavior in Education, concluded that "no one taxonomy of organizational behavior based on present theories would be desirable even if it could be produced."⁵ They discovered that there appeared to be numerous possibilities for grouping objects and that each grouping, depending on the purpose, was better than any other grouping. Therefore, depending on the classification purposes, each way of classifying objects may be as useful and as necessary as the other.

In considering classification schemes for a multi-dimensional classification system, some of Hammett's Priestley Medal philosophy on the communication problem is valuable.⁶ His approach may be described very briefly as follows. He has suggested that we can treat a body of knowledge as a solid and like a solid, we can divide it into smaller bodies of subject matter by means of a series of mutually perpendicular cuts. Harris and Wallace have utilized Hammett's Priestley Medal philosophy with great effectiveness in designing a punched card for use in

⁵F. W. Lutz, et al., "The TOBE Project," in Developing Taxonomies of Organizational Behavior in Education. ed. D. E. Griffiths (Chicago: Rand McNally, 1967). In Press, p. 9.

⁶L. P. Hammett, "Choice and Change in Scientific Communication," Chemical and Engineering News, Vol. 39 (April 10, 1961), pp. 94-97.

inorganic and analytical chemistry.⁷ Similarly this philosophy could be applied to the field of education in attempting to develop a multi-dimensional classification system for educational research.

Related Literature

A review of the related literature indicates that there has been limited success with regard to the classification of educational research and the storage and retrieval of this information. Most systems, such as that developed by Western Reserve University or the Canadian Council for Research in Education, employ a "visual bibliographic retrieval system." IBM has developed a useful approach to the problem of furnishing information promptly with the mechanized keyword-in-context (KWIC) indexing method. This method, however, has been developed primarily for the literature of scientific disciplines.

The Educational Research Information Center (ERIC), established by the United States Office of Education, is a national educational information system that is utilizing many information-processing techniques that can facilitate the effective, efficient retrieval of information. ERIC is a decentralized system consisting of a central staff at the

⁷W. E. Harris and W. J. Wallace, "Punched Cards and the Research Scientist," Chemistry in Canada (June, 1963), pp. 41-48.

Office of Education and eighteen clearinghouses, each specializing in a particular educational area. The clearinghouses acquire, review, abstract, and index documents, and monthly publications including information on all new acquisitions to the ERIC collection are distributed to ERIC subscribers. Copies of documents, in hard copy or microfiche form, may then be obtained by ordering from Central ERIC.

At a recent council meeting of EDUCOM (October 31--November 1, 1967), a proposal for more efficient information storage and retrieval was presented.⁸ The view was expressed that access to ideas in documents rather than to the documents themselves should be considered in solving the problem of information storage and retrieval. Such a point of view would favor digital storage in a computer, permitting manipulation of text, over document storage. This idea holds great promise for education; there are, however, several major problems still to be overcome. Possibly the greatest problem at this time is the tremendous expense involved in establishing and maintaining such a system. Other problems such as limited access to the computer and time for type-out require solution before a computerized system would be effective and efficient.

⁸Document vs Digital Storage of Textual Materials for Network Operations. (A Bulletin of EDUCOM. Pittsburgh: Inter-university Communications Council, 1967), pp. 1-5.

Considerable research has been undertaken recently in an attempt to develop taxonomies of organizational behavior in education. A significant research in this area has been the TOBE Project--Developing Taxonomies of Organizational Behavior in Education--undertaken by Lutz, Hencley and Evans.⁹ This project has met with moderate success; although a single taxonomy of organizational behavior in education was not developed, the schemata which were developed provide useful tools for the practitioner in educational organizations. The schemata also offer direction for further research in the area of taxonomies of education.

⁹Lutz, op. cit.

CHAPTER II

RESEARCH PLAN AND DESIGN

I. DESIGN OBJECTIVES

A great variety of literature has appeared with respect to the design and objectives of information storage and retrieval systems utilizing keysort cards.^{1,2,3} From the various writings, a number of general design objectives have emerged which this project has attempted to meet. The general design objectives of this project have been:

1. To organize the educational research on an efficient, effective and systematic basis.
2. To enable the operations of coding, punching, and searching to be accomplished with the greatest facility and effectiveness.
3. To provide the user with basic information in his field of interest.

II. DESIGN OF THE CARD

In an effort to meet the general design objectives

¹Antony Charles Foskett, A Guide to Personal Indexes Using Edge-Notched and Peek-A-Boo Cards (London: Bingley, 1967).

²C. O. Elliott and R. S. Wasley, Business Information Processing Systems (Homewood: Richard D. Irwin, Inc., 1965).

³R. S. Casey, et al., Punched Cards, Their Application to Science and Industry (New York: Reinhold Publishing Corp., 1958).

as outlined above, it was necessary to design appropriately printed Keysort Cards. Figure 1 shows the McBee Keysort Card which was designed for use in this project. It was felt that a card of this size (5" x 8") was most appropriate for the coding and abstracting space requirements for educational research. The coding space on the card has been subdivided into seven sections.

Section 1

The first section, in superimposed coding, is for denoting authorship of the thesis. Superimposed code is a code in which a group of holes are used to denote a single concept. In this instance the first four letters of the author's surname may be indicated. For example, to denote the surname Smith, one would punch QT (for S) under 1st letter, MP (for M) under 2nd letter, IL (for I) under 3rd letter, and QT (for T) under 4th letter.

Section 2

Section two, in direct code, is for classification of research according to the academic degree--M.Ed., Ph.D. or Other (M.A., B.Ed. or Ed.D.)--earned by the thesis author. Direct coding utilizes a single hole for indicating a single factor. For example, to indicate a thesis which has earned the degree Doctor of Philosophy, one would punch Ph.D. under the heading Degree.

[illegible]

FIGURE 1

DESIGN OF KEYSORT CARD USED IN MULTI-DIMENSIONAL
CLASSIFICATION SYSTEM

Section 3

The third section, in combination code, is for denoting the year in which the thesis has been recommended to the Faculty of Graduate Studies for acceptance. Through various combinations of the numbers represented, any number from 0 to 9 may be indicated. For example, to indicate a thesis which was approved in 1962, one would punch 4 and 2 (for 6) under Tens and 2 (for 2) under Units.

Section 4

Section four is useful for indicating the department in which the research was carried out. The following abbreviations have been used for indicating the six departments in the Faculty of Education: AD. for Department of Educational Administration; EL. for Department of Elementary Education; FD. for Department of Educational Foundations; PSY. for Department of Educational Psychology; SEC. for Department of Secondary Education; and VOC. for Department of Industrial Arts and Vocational Education. Two holes, numbered 1 and 2, are spares. This section, like section 2, is in direct code and to indicate the department in which the research was carried out, one only has to punch out that hole signifying the appropriate department.

Section 5

The fifth section, in direct and superimposed coding is used for coding the major area of investigation and

subject index respectively. W. D. Knill's classification of theses⁴ has been followed in developing this section. The major area of investigation utilizes the following abbreviations: CURR. for Curriculum; SPEC. for Special Areas; PERS. for Personnel; FACIL. for Facilities; ADMIN. for Administration; and OTHER for those areas not included in the preceding designated areas such as University Studies and Higher Education.

The subject index utilizes key letters as found in Table I, pages 15 to 18. By using the major area of research and the subject index in conjunction with each other, one may attain a high degree of specificity. For example, to denote a thesis studying the English program in the secondary schools one would punch CURR., signifying the major area of research, and ENGL., the key letters for the subject index.

Section 6

Section six is unassigned and may be used for further coding when necessary.

Section 7

The seventh section provides for the classification of research design in direct code. This section has been

⁴W. D. Knill, "A Classification of Theses in Education Completed at the University of Alberta, 1929-1966" (Edmonton: The Faculty of Education, University of Alberta, 1966).

TABLE I
KEY LETTERS USED IN SUBJECT INDEX

Key
Letters

I. CURRICULUM

A. Subject Areas in the Elementary and Secondary Schools

1. Mathematics	NATH.
2. Art Education	ARTE.
3. English	ENGL.
4. Handwriting	HAND.
5. Health Education	HEAL.
6. Music Education	MUSI.
7. Drama Education	DRAM.
8. Physical Education	PHYS.
9. Reading	READ.
10. Science	SCIE.
11. Social Studies	SOST.
12. Agricultural, Industrial Education . . .	AGIN.
13. Business Education	BUSI.
14. Foreign Languages	FOLA.
15. Home Economics Education	HOEC.
16. Industrial Arts	INAR.

B. Curriculum - Other Aspects

1. Adult Education	ADUL.
2. Articulation of Educational Units	ARTI.
3. Child Development	CHDE.
4. Adolescent Development - Youth Culture .	ADDE.
5. Extra-Curricular Activities	EXCU.
6. The Family and Education	FAMI.
7. General Education	GENE.
8. Gifted Children	GICH.
9. Individual Differences	INDI.
10. Integration	INTE.
11. Norms and Grouping	NOGR.
12. Parent-Teacher-Community Relationship .	PTCR.
13. Primary Education	PRIM.
14. Prognosis and Prediction	PRPR.
15. Religious Education	RELI.
16. Safety Education	SAFE.
17. Teacher-Student-Parent Attitude	TSPA.

TABLE I (continued)

	Key Letters
II. SPECIAL AREAS	
A. Guidance-Counselling-Pupil Personnel	GCPP.
B. Library	LIBR.
C. Health Service	HESE.
D. Lunch Programs	LUPR.
E. Transportation and Lodging	TRLO.
F. Audio-Visual Materials	AUVI.
G. Recreation	RECR.
H. Special Education for the Handicapped	HAND.
I. Follow-up Studies	FOLL.
J. Pupil Attendance	PUAT.
K. Statistical and Computer Design	STCO.
L. Philosophy of Education	PHIL.
III. PERSONNEL	
A. Classroom Teachers	
1. Preparation Patterns	PRPA.
2. Teacher Movement Patterns	TEMP.
3. Studies in Effective Teaching	EFTE.
4. Selection and Induction Policies and Practices	SIPP.
5. In Service Training	INST.
6. Supply and Demand	SUDE.
7. Professional Organizations	PROR.
8. Other	OTHE.
B. Administrative	
1. Training	TRAI.
2. Organizational Behavior, Role Studies, Leadership	ORBE.
3. Selection Practices	SELE.

TABLE I (continued)

	Key Letters
C. Custodians	CUST.
D. Bus Drivers	BUSD.
E. Health Service Personnel	HESE.
F. Lunchroom Personnel	LUNC.
G. Librarians	LIBR.
IV. FACILITIES	
A. Alberta Building Costs	BUCO.
B. Services Provided for in Alberta School Building	SERV.
C. Community Participation	COMM.
D. Extent of Cooperative Buying to Reduce Costs	COBU.
E. Insurance Programs	INSU.
V. ORGANIZATION, ADMINISTRATION, AND FINANCE	
A. Plans of Organization (8-4; 6-6; 6-3-3) . .	PLOR.
B. Provincial Department Structure for Administration and Supervision	PDSA.
C. Administrative Units	ADUN.
D. Administrative Structure within Local Districts	ASLD.
E. Place of the Intermediate Unit--Role of County or Divisional Superintendent	SUPE.
F. School Board Organization and Operation . .	SB00.
G. Provisions for Post High School Instruction	PPHS.

TABLE I (continued)

	Key Letters
H. Place of the Centralized Composite Schools as Now Organized	CECS.
I. Expenditure Analysis--Books, Supplies, etc etc.	EXAN.
J. Taxable Valuation of Units	TAVA.
K. Effects of Bonding and Debenture Limitations	EBDL.
L. Expenditures and Size of Districts	EXSD.
M. Salary Schedules	SASC.
N. Effect of Provincial Foundation Program on District or City Organization	EPFP.
O. Geographical Considerations and District Organization	GCDO.
P. Per-Pupil Costs by Districts	PPCD.
Q. Provincial or Federal Support	PRFE.
R. Assessment Practice	ASPR.
S. Revenue Sources	RESO.
T. Other	OTHE.

VI. OTHER

A. University Studies and Higher Education . .	UNIV.
--	-------

divided into three sub-sections in an attempt to develop a continuum on which the research design of a thesis may be placed. The three sub-sections, with the abbreviations used on the Keysort Cards in parentheses, are Experimental Research (EXP.), Comparative Research (COMP.), and Non-Experimental Research (NON-EXP.). These three categories of research have been defined in the following manner:

1. Experimental Research--the essential element is the development of experimental and control situations prior to the actual experiments.⁵ For example, two or more groups are matched, different sets of conditions are administered to the sample population, and then the results of the different treatments on the matched subjects are compared.

2. Nonexperimental Research--concerned primarily with the investigation of conditions as they really are or were; the accumulation of factual data.⁶

3. Comparative Research--forms a link between experimental and nonexperimental research; research in which an attempt is made to determine common factors or relationships among phenomena.⁷

⁵A. J. Galfo and E. Miller, Interpreting Educational Research (Dubuque: Brown Co., 1965), p. 16.

⁶Hildreth Hoke McAshan, Elements of Educational Research (New York: McGraw-Hill Book Company, Inc., 1963), p. 10.

⁷Galfo and Miller, loc. cit.

For the purposes of this study, several coding positions have been assigned to each of the above subsections. The coding positions, and their definitions,⁸ are as follows:

1. Experimental research

- a) Basic research (BAS.)--scientific investigation oriented to the establishment of new theory.
- b) Analytic research (AN.)--concerned primarily with the analysis of a specific case or variable.
- c) Applied research (APP.)--investigation that is oriented to the application and demonstration of the findings of basic research and their usefulness in the development of new processes.

2. Nonexperimental research

- a) Historical research (HIST.)--the accumulation of facts in relation to a particular time sequence to determine whether (or what) events in history actually happened.
- b) Survey research (SURV.)--investigation into some educational problem area that may or may not result in recommendations: study of wide magnitude rather than study in depth.
- c) Case research (CASE.)--analysis and treatment of human problems on an individual basis: research in depth rather than breadth, limited in scope usually to individuals or small groups.

3. Comparative research

- a) Normative comparison (NO.)--a comparison made between populations considered to be normal or average: comparison of obtained

⁸Definitions derived from Galfo and Miller, Ibid., and McAshan, Ibid.

data with previously established standards or averages.

- b) Sequential comparison (SEQ.)--comparative analysis of objects according to some predetermined order of events: 'before and after' study.

The word research does not mean the same thing to everyone within the field of education. One becomes aware of this division of opinion regarding the meaning of research while reading studies related to education or critical reviews of these studies. Semanticists, however, state that the definition of words is not in the words but in ourselves.⁹ Therefore, although the distinction between the various sub-sections in research design may be somewhat artificial, this distinction has been attempted throughout the study.

The design of the Keysort Cards permits the typing of a thesis abstract on the face of the card. The abstracts are brief summaries (75-150 words) of the thesis that enable one using the system to identify specific theses that may be relevant to his special interests. The goal of this abstracting has been to preserve the basic information content while reducing the word content of the thesis. The principal advantage of abstracting is that it permits one to survey a greater quantity of information while reducing the amount of time required to keep informed.

⁹S. I. Hayakawa as cited in Galfo and Miller, op. cit.

III. OPERATION OF THE SYSTEM

The general principles involved in the establishment of the Keysort system used in this multi-dimensional classification system are extremely simple. Values have been assigned to the holes around the edges of the cards (as in Figure 1) in accordance with the previously determined basic requirements.

A positive classification is indicated by notching the hole to the edge of the card. This is a simple hand punch operation. When the cards are to be sorted, a sorting needle is inserted into a group of cards through the desired classification hole and the card body is raised. The cards which fall from the needle are the desired ones.

Figures 2, 3, and 4 on pages 23, 24, and 25, respectively, show examples of fully completed cards representative of the cards used in the multi-dimensional classification system.

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										INSURANCE PRACTICES AND EXPERIENCE OF DIVISION AND COUNTY SCHOOL SYSTEMS IN THE PROVINCE OF ALBERTA. 79 pp.										UNIVERSITY OF ALBERTA EDUCATIONAL RESEARCH CLASSIFICATION INDEX									
										An investigation of the insurance practices and experience of the large rural school systems of Alberta to determine how school authorities met their increased responsibility for school insurance and to determine whether the experience of school boards has led them to wise spending of the insurance dollar. The study revealed the complexity of school insurance problems, the high cost of school insurance, and the general lack of agreement as to what risks (other than those prescribed by law) should be insured, and as to what amounts of insurance should be purchased with respect to certain risks.										SUBJECT INDEX									
										AUTHOR INDEX										CURREN- SPECI- PERSO- FACIL- ADMIN- OTHER									
										1ST LETTER										2ND LETTER									
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FIGURE 2

EXAMPLE OF COMPLETED KEYSORT CARD USED IN
MULTI-DIMENSIONAL CLASSIFICATION SYSTEM

<div> <div> <div>AD</div> <div>EH</div> <div>IL</div> <div>MP</div> <div>QT</div> <div>UZ</div> </div> <div>1ST LETTER</div> </div> <div> <div>AD</div> <div>EH</div> <div>IL</div> <div>MP</div> <div>QT</div> <div>UZ</div> </div> <div>2ND LETTER</div> <div> <div>AD</div> <div>EH</div> <div>IL</div> <div>MP</div> <div>QT</div> <div>UZ</div> </div> <div>3RD LETTER</div> <div> <div>AD</div> <div>EH</div> <div>IL</div> <div>MP</div> <div>QT</div> <div>UZ</div> </div> <div>4TH LETTER</div> <div> <div>AD</div> <div>EH</div> <div>IL</div> <div>MP</div> <div>QT</div> <div>UZ</div> </div> <div>5TH LETTER</div> <div> <div>AD</div> <div>EH</div> <div>IL</div> <div>MP</div> <div>QT</div> <div>UZ</div> </div> <div>6TH LETTER</div> <div> <div>AD</div> <div>EH</div> <div>IL</div> <div>MP</div> <div>QT</div> <div>UZ</div> </div> <div>7TH LETTER</div> <div> <div>AD</div> <div>EH</div> <div>IL</div> <div>MP</div> <div>QT</div> <div>UZ</div> </div> <div>8TH LETTER</div> <div> <div>AD</div> <div>EH</div> <div>IL</div> <div>MP</div> <div>QT</div> <div>UZ</div> </div> <div>9TH LETTER</div> <div> <div>AD</div> <div>EH</div> <div>IL</div> <div>MP</div> <div>QT</div> <div>UZ</div> </div> <div>10TH LETTER</div> <div> <div>AD</div> <div>EH</div> <div>IL</div> <div>MP</div> <div>QT</div> <div>UZ</div> </div> <div>11TH LETTER</div> <div> <div>AD</div> <div>EH</div> <div>IL</div> <div>MP</div> <div>QT</div> <div>UZ</div> </div> <div>12TH LETTER</div>										<div> <div> <div>7</div> <div>4</div> <div>2</div> <div>1</div> </div> <div>TENS</div> </div> <div> <div>7</div> <div>4</div> <div>2</div> <div>1</div> </div> <div>UNITS</div> <div> <div>AD.</div> <div>EL.</div> <div>FD.</div> <div>PSY.</div> <div>SEC.</div> <div>VOC.</div> <div>1</div> <div>2</div> </div>										<div> <div>Y</div> <div>E</div> <div>A</div> <div>R</div> </div>										<div> <div>D</div> <div>E</div> <div>P</div> <div>A</div> <div>R</div> <div>T</div> <div>M</div> <div>E</div> <div>N</div> <div>T</div> </div>										<div> <div>AD</div> <div>EH</div> <div>IL</div> <div>MP</div> <div>QT</div> <div>UZ</div> </div> <div>1ST LETTER</div>										<div> <div>AD</div> <div>EH</div> <div>IL</div> <div>MP</div> <div>QT</div> <div>UZ</div> </div> <div>2ND LETTER</div>										<div> <div>AD</div> <div>EH</div> <div>IL</div> <div>MP</div> <div>QT</div> <div>UZ</div> </div> <div>3RD LETTER</div>										<div> <div>AD</div> <div>EH</div> <div>IL</div> <div>MP</div> <div>QT</div> <div>UZ</div> </div> <div>4TH LETTER</div>										<div> <div>AD</div> <div>EH</div> <div>IL</div> <div>MP</div> <div>QT</div> <div>UZ</div> </div> <div>5TH LETTER</div>										<div> <div>AD</div> <div>EH</div> <div>IL</div> <div>MP</div> <div>QT</div> <div>UZ</div> </div> <div>6TH LETTER</div>										<div> <div>AD</div> <div>EH</div> <div>IL</div> <div>MP</div> <div>QT</div> <div>UZ</div> </div> <div>7TH LETTER</div>										<div> <div>AD</div> <div>EH</div> <div>IL</div> <div>MP</div> <div>QT</div> <div>UZ</div> </div> <div>8TH LETTER</div>										<div> <div>AD</div> <div>EH</div> <div>IL</div> <div>MP</div> <div>QT</div> <div>UZ</div> </div> <div>9TH LETTER</div>										<div> <div>AD</div> <div>EH</div> <div>IL</div> <div>MP</div> <div>QT</div> <div>UZ</div> </div> <div>10TH LETTER</div>										<div> <div>AD</div> <div>EH</div> <div>IL</div> <div>MP</div> <div>QT</div> <div>UZ</div> </div> <div>11TH LETTER</div>										<div> <div>AD</div> <div>EH</div> <div>IL</div> <div>MP</div> <div>QT</div> <div>UZ</div> </div> <div>12TH LETTER</div>																			
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FIGURE 3

EXAMPLE OF COMPLETED KEYSORT CARD USED IN MULTI-DIMENSIONAL CLASSIFICATION SYSTEM

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justify-content: space-between;"> <div> <div>AD</div> <div>EH</div> <div>IL</div> <div>MP</div> <div>QT</div> <div>UZ</div> </div> <div>12TH LETTER</div> </div>										<div style="display: flex; justify-content: space-between;"> <div> <div>AD</div> <div>EH</div> <div>IL</div> <div>MP</div> <div>QT</div> <div>UZ</div> </div> <div>13TH LETTER</div> </div>										<div style="display: flex; justify-content: space-between;"> <div> <div>AD</div> <div>EH</div> <div>IL</div> <div>MP</div> <div>QT</div> <div>UZ</div> </div> <div>14TH LETTER</div> </div>										<div style="display: flex; justify-content: space-between;"> <div> <div>AD</div> <div>EH</div> <div>IL</div> <div>MP</div> <div>QT</div> <div>UZ</div> </div> <div>15TH LETTER</div> </div>										<div style="display: flex; justify-content: space-between;"> <div> <div>AD</div> <div>EH</div> <div>IL</div> <div>MP</div> <div>QT</div> <div>UZ</div> </div> <div>16TH LETTER</div> </div>										<div style="display: flex; justify-content: space-between;"> <div> <div>AD</div> <div>EH</div> <div>IL</div> <div>MP</div> <div>QT</div> <div>UZ</div> </div> <div>17TH LETTER</div> </div>										<div style="display: flex; justify-content: space-between;"> <div> <div>AD</div> <div>EH</div> <div>IL</div> <div>MP</div> <div>QT</div> <div>UZ</div> </div> <div>18TH LETTER</div> </div>										<div style="display: flex; justify-content: space-between;"> <div> <div>AD</div> <div>EH</div> <div>IL</div> <div>MP</div> <div>QT</div> <div>UZ</div> </div> <div>19TH LETTER</div> </div>										<div style="display: flex; justify-content: space-between;"> <div> <div>AD</div> <div>EH</div> <div>IL</div> <div>MP</div> <div>QT</div> <div>UZ</div> </div> <div>20TH LETTER</div> </div>										<div style="display: flex; justify-content: space-between;"> <div> <div>AD</div> <div>EH</div> <div>IL</div> <div>MP</div> <div>QT</div> <div>UZ</div> </div> <div>21TH LETTER</div> </div>										<div style="display: flex; justify-content: space-between;"> <div> <div>AD</div> <div>EH</div> <div>IL</div> <div>MP</div> <div>QT</div> <div>UZ</div> </div> <div>22TH LETTER</div> </div>										<div style="display: flex; justify-content: space-between;"> <div> <div>AD</div> <div>EH</div> <div>IL</div> <div>MP</div> <div>QT</div> <div>UZ</div> </div> <div>23TH LETTER</div> </div>										<div style="display: flex; justify-content: space-between;"> <div> <div>AD</div> <div>EH</div> <div>IL</div> <div>MP</div> <div>QT</div> <div>UZ</div> </div> <div>24TH LETTER</div> </div>										<div style="display: flex; justify-content: space-between;"> <div> <div>AD</div> <div>EH</div> <div>IL</div> <div>MP</div> <div>QT</div> <div>UZ</div> </div> <div>25TH LETTER</div> </div>										<div style="display: flex; justify-content: space-between;"> <div> <div>AD</div> <div>EH</div> <div>IL</div> <div>MP</div> <div>QT</div> <div>UZ</div> </div> <div>26TH LETTER</div> </div>										<div style="display: flex; justify-content: space-between;"> <div> <div>AD</div> <div>EH</div> <div>IL</div> <div>MP</div> <div>QT</div> <div>UZ</div> </div> <div>27TH LETTER</div> </div>										<div style="display: flex; justify-content: space-between;"> <div> <div>AD</div> <div>EH</div> <div>IL</div> <div>MP</div> <div>QT</div> <div>UZ</div> </div> <div>28TH LETTER</div> </div>										<div style="display: flex; justify-content: space-between;"> <div> <div>AD</div> <div>EH</div> <div>IL</div> <div>MP</div> <div>QT</div> <div>UZ</div> </div> <div>29TH LETTER</div> </div>										<div style="display: flex; justify-content: space-between;"> <div> <div>AD</div> <div>EH</div> <div>IL</div> <div>MP</div> <div>QT</div> <div>UZ</div> </div> <div>30TH LETTER</div> </div>										<div style="display: flex; justify-content: space-between;"> <div> <div>AD</div> <div>EH</div> <div>IL</div> <div>MP</div> <div>QT</div> <div>UZ</div> </div> <div>31TH LETTER</div> </div>										<div style="display: flex; justify-content: space-between;"> <div> <div>AD</div> <div>EH</div> <div>IL</div> <div>MP</div> <div>QT</div> <div>UZ</div> </div> <div>32TH LETTER</div> </div>										<div style="display: flex; justify-content: space-between;"> <div> <div>AD</div> <div>EH</div> <div>IL</div> <div>MP</div> <div>QT</div> <div>UZ</div> </div> <div>33TH LETTER</div> </div>										<div style="display: flex; justify-content: space-between;"> <div> <div>AD</div> <div>EH</div> <div>IL</div> <div>MP</div> <div>QT</div> <div>UZ</div> </div> <div>34TH LETTER</div> </div>										<div style="display: flex; justify-content: space-between;"> <div> <div>AD</div> <div>EH</div> <div>IL</div> <div>MP</div> <div>QT</div> <div>UZ</div> </div> <div>35TH LETTER</div> </div>										<div style="display: flex; justify-content: space-between;"> <div> <div>AD</div> <div>EH</div> <div>IL</div> <div>MP</div> <div>QT</div> <div>UZ</div> </div> <div>36TH LETTER</div> </div>										<div style="display: flex; justify-content: space-between;"> <div> <div>AD</div> <div>EH</div> <div>IL</div> <div>MP</div> <div>QT</div> <div>UZ</div> </div> <div>37TH LETTER</div> </div>										<div style="display: flex; justify-content: space-between;"> <div> <div>AD</div> <div>EH</div> <div>IL</div> <div>MP</div> <div>QT</div> <div>UZ</div> </div> <div>38TH LETTER</div> </div>										<div style="display: flex; justify-content: space-between;"> <div> <div>AD</div> <div>EH</div> <div>IL</div> <div>MP</div> <div>QT</div> <div>UZ</div> </div> <div>39TH LETTER</div> </div>										<div style="display: flex; justify-content: space-between;"> <div> <div>AD</div> <div>EH</div> <div>IL</div> <div>MP</div> <div>QT</div> <div>UZ</div> </div> <div>40TH LETTER</div> </div>										<div style="display: flex; justify-content: space-between;"> <div> <div>AD</div> <div>EH</div> <div>IL</div> <div>MP</div> <div>QT</div> <div>UZ</div> </div> <div>41TH LETTER</div> </div>										<div style="display: flex; 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FIGURE 4

EXAMPLE OF COMPLETED KEYSORT CARD USED IN
MULTI-DIMENSIONAL CLASSIFICATION SYSTEM

CHAPTER III

ANALYSIS OF DATA

This chapter will present the general classification analysis of the multi-dimensional classification system.

I. TOTAL NUMBER OF THESES AND ACADEMIC DEGREE

Table II lists the total number of Education theses completed at the University of Alberta for each of the years during the period 1929 to 1967. As well, an analysis of the academic degree earned has been included.

From 1929 to 1939 the graduate degrees in education were the Master of Arts and the Bachelor of Education. Consequently, all degrees completed in that period fall under the classification "Other". After the December meeting of the Senate in 1939, however, two new degrees were established for graduate students of Education: (1) the degree of Bachelor of Education (replacing the former Master of Arts (in education)); (2) the degree of Master of Education (replacing the former Bachelor of Education). Then, in 1942 the Bachelor of Education program assumed undergraduate rather than graduate status. As a result of these changes the number of theses completed for the degree Master of Education began a relatively rapid increase beginning in 1940, whereas the number of theses completed for the degrees of Master of Arts (in Education) and Bachelor of Education--

TABLE II
NUMBER OF THESES COMPLETED EACH YEAR
CLASSIFIED BY DEGREE EARNED

Year	D e g r e e			Total
	M.Ed.	Ph.D.	Other*	
1929	-	-	-	-
1930	-	-	2	2
1931	-	-	2	2
1932	-	-	3	3
1933	-	-	7	7
1934	-	-	7	7
1935	-	-	3	3
1936	-	-	3	3
1937	-	-	5	5
1938	-	-	5	5
1939	-	-	7	7
1940	1	-	7	8
1941	2	-	13	15
1942	1	-	9	10
1943	5	-	2	7
1944	5	-	1	6
1945	3	-	1	4
1946	3	-	1	4
1947	1	-	-	1
1948	8	-	-	8
1949	20	-	-	20
1950	13	-	-	13
1951	4	-	-	4
1952	16	-	-	16
1953	5	-	-	5
1954	10	-	-	10
1955	10	-	-	10
1956	14	-	-	14
1957	13	-	-	13
1958	15	1	-	16
1959	27	7	-	34
1960	25	1	1	27
1961	27	7	1	35
1962	35	2	-	37
1963	47	6	-	53
1964	56	8	-	64
1965	58	17	-	75
1966	78	12	1	91
1967	56	24	-	80
Totals	558	85	81	724

* Includes B.Ed., M.A., and Ed.D.

both degrees classified under "Other"--reached a peak of 13 theses in 1941 and then quickly declined, eventually disappearing by 1947.

In 1957 the degrees Doctor of Philosophy and Doctor of Education were established in the Faculty of Education. The number of theses completed for the degree Doctor of Philosophy have increased from one in 1958 to twenty-four in 1967. During the period 1958-1967, 85 degrees were completed for the degree Doctor of Philosophy as compared to three theses completed for the degree Doctor of Education.

From the last column of Table I it may be observed that graduate work in education has undergone a great upsurge in recent years. Whereas 212 theses were completed in the period 1929-1957, 512 theses were completed in the subsequent period 1958-1967.

II. THESES ANALYSES BY DEPARTMENT AND SUBJECT AREA

Graduate course work was first offered by divisions or departments in the Faculty of Education in 1953 by the Divisions of Educational Psychology, Elementary Education, and Secondary Education, and Administration. In 1957 the Division of Educational Administration and Supervision was formed and graduate work was offered through this division as well. These divisions were followed in formation by the Division of Educational Foundations in 1962--all Divisions assumed the status of Departments in 1963--and the

Department of Industrial and Vocational Education in 1964.

Tables III-VIII provide an analysis of the theses completed in the six Departments of the Faculty of Education --the Department of Educational Psychology, Elementary Education, Secondary Education, Educational Administration, Educational Foundations, and Industrial and Vocational Education, represented in Tables III to VIII respectively. For each of the six Departments, the number of theses completed in each year have been classified according to degree earned and the major subject area investigated.

All the Departments give evidence of undergoing considerable growth in graduate work, although it is too early to ascertain any trends in the Department of Industrial and Vocational Education (Table VIII) where only three theses have been completed.

An analysis of Tables III-VIII shows that 217 theses have been completed in the Department of Educational Administration, followed by the Department of Secondary Education (126 theses), the Department of Educational Psychology (117 theses), the Department of Elementary Education (58 theses), the Department of Educational Foundations (27 theses), and the Department of Industrial and Vocational Education (3 theses).

Trends in the areas of investigation by the various departments are evident. Seventy per cent of the theses completed in the Department of Educational Psychology

TABLE III

THESES COMPLETED IN THE DEPARTMENT OF EDUCATIONAL
PSYCHOLOGY CLASSIFIED BY DEGREE EARNED AND
AREA OF INVESTIGATION 1954 - 1967

Year	Degree			Area of Investigation				
	M.Ed.	Ph.D.	Oth.	Curr.	Spec.	Pers.	Facil.	Admin. Oth.
1954	4	-	-	3	-	-	-	- 1
1955	3	-	-	2	-	1	-	-
1956	7	-	-	7	-	-	-	-
1957	8	-	-	5	2	-	-	1
1958	2	-	-	1	-	1	-	-
1959	6	4	-	7	2	-	-	1
1960	7	-	1	3	3	1	-	1
1961	3	2	-	4	1	-	-	-
1962	5	1	-	4	1	1	-	-
1963	5	2	-	5	1	1	-	-
1964	8	3	-	9	2	-	-	-
1965	15	6	-	13	7	1	-	-
1966	12	2	-	10	3	-	-	1
1967	5	6	-	9	2	-	-	-
Totals	90	26	1	82	24	6	-	5

TABLE IV

THESES COMPLETED IN THE DEPARTMENT OF ELEMENTARY
EDUCATION CLASSIFIED BY DEGREE EARNED AND
AREA OF INVESTIGATION 1954 - 1967

Year	Degree			Area of Investigation				
	M.Ed.	Ph.D.	Oth.	Curr.	Spec.	Pers.	Facil.	Admin. Oth.
1954	-	-	-	-	-	-	-	-
1955	1	-	-	1	-	-	-	-
1956	-	-	-	-	-	-	-	-
1957	2	-	-	1	1	-	-	-
1958	-	-	-	-	-	-	-	-
1959	3	-	-	2	-	-	-	1
1960	4	-	-	2	1	1	-	-
1961	1	-	-	1	-	-	-	-
1962	3	-	-	3	-	-	-	-
1963	8	-	-	8	-	-	-	-
1964	6	-	-	5	-	1	-	-
1965	12	-	-	9	1	2	-	-
1966	11	1	-	12	-	-	-	-
1967	6	-	-	5	-	1	-	-
Totals	57	1	-	49	3	5	-	1

TABLE V

THESES COMPLETED IN THE DEPARTMENT OF SECONDARY
EDUCATION CLASSIFIED BY DEGREE EARNED AND
AREA OF INVESTIGATION 1954 - 1967

Year	Degree			Area of Investigation				
	M.Ed.	Ph.D.	Oth.	Curr.	Spec.	Pers.	Facil.	Admin. Oth.
1954	-	-	-	-	-	-	-	-
1955	5	-	-	5	-	-	-	-
1956	5	-	-	3	-	-	-	2
1957	2	-	-	-	1	-	-	1
1958	6	-	-	4	1	1	-	-
1959	6	-	-	4	-	1	-	1
1960	7	1	-	6	-	1	-	1
1961	8	-	-	5	1	1	-	-
1962	13	-	-	10	1	1	-	-
1963	12	1	-	11	1	1	-	-
1964	13	1	-	13	1	-	-	-
1965	6	2	-	7	1	-	-	-
1966	14	-	1	15	-	-	-	-
1967	17	6	-	19	1	3	-	-
Totals	114	11	1	102	8	9	-	6 1

TABLE VI

THESES COMPLETED IN THE DEPARTMENT OF EDUCATIONAL
ADMINISTRATION CLASSIFIED BY DEGREE EARNED AND
AREA OF INVESTIGATION 1958 - 1967

Year	Degree			Area of Investigation					
	M.Ed.	Ph.D.	Oth.	Curr.	Spec.	Pers.	Facil.	Admin.	Oth.
1958	7	1	-	4	-	2	-	2	-
1959	12	3	-	5	2	6	-	2	-
1960	7	-	-	3	-	2	-	2	-
1961	12	5	1	4	2	5	-	7	-
1962	13	1	-	4	2	2	-	5	1
1963	16	3	-	6	2	9	-	2	-
1964	24	4	-	7	1	11	-	9	-
1965	20	7	-	5	2	14	1	5	-
1966	36	8	-	8	3	24	1	7	1
1967	26	11	-	10	1	21	-	4	1
Totals	173	43	1	58	15	96	2	43	3

TABLE VII

THESES COMPLETED IN THE DEPARTMENT OF EDUCATIONAL
FOUNDATIONS CLASSIFIED BY DEGREE EARNED AND
AREA OF INVESTIGATION 1961 - 1967

Year	Degree			Area of Investigation				
	M.Ed.	Ph.D.	Oth.	Curr.	Spec.	Pers.	Facil.	Admin. Oth.
1961	2	-	-	-	1	-	-	1 -
1962	1	-	-	-	-	-	-	1 -
1963	6	-	-	1	3	-	-	2 -
1964	5	-	-	-	3	-	-	2 -
1965	5	2	-	-	6	-	-	- 1
1966	4	1	-	-	5	-	-	- -
1967	-	1	-	-	-	-	-	- 1
Totals	23	4	-	1	18	-	-	6 2

TABLE VIII
THESES COMPLETED IN THE DEPARTMENT OF INDUSTRIAL AND VOCATIONAL
EDUCATION CLASSIFIED BY DEGREE EARNED AND
AREA OF INVESTIGATION 1965 - 1967

Year	Degree			Area of Investigation			
	M.Ed.	Ph.D.	Oth.	Curr.	Spec.	Pers.	Facil. Admin. Oth.
1965	-	-	-	-	-	-	-
1966	1	-	-	1	-	-	-
1967	2	-	-	-	-	1	-
Totals	3	-	-	1	-	1	-

investigated some aspect of curriculum. An even greater percentage of the theses completed in the Department of Elementary Education and the Department of Secondary Education investigated some aspect of curriculum; the respective percentages being 84 and 80 per cent. The major areas of investigation in the Department of Educational Administration have been Personnel (46 per cent), Curriculum (28 per cent), and Administration (21 per cent of the theses). Sixty-seven per cent of the theses in the Department of Educational Foundations have investigated special areas such as history and/or philosophy of education. The Department of Industrial and Vocational Education, with a total of three theses, has one thesis in each of the following areas: curriculum, personnel, and other.

The multi-dimensional classification system as developed in this study provides for analyses of theses in numerous ways. The analyses presented in this chapter are provided only to demonstrate some of the analyses which may be carried out.

CHAPTER IV

SUMMARY OF THE STUDY AND CONCLUSIONS

I. SUMMARY OF THE STUDY

The main purpose of this study was to develop a usable multi-dimensional classification system appropriate for theses and dissertations completed in the School of Education, the College of Education, and the Faculty of Education at the University of Alberta during the years 1929 - 1967. Seven hundred twenty-four theses and dissertations were abstracted, classified, and placed on McBee Keysort cards.

The theses and dissertations were classified according to author, academic degree earned, year of acceptance, area and subject investigated, department in which the research was undertaken, and research design. For the purposes of illustration a number of analyses utilizing the multi-dimensional classification system were carried out.

II. CONCLUSIONS

The multi-dimensional classification system developed in this study has provided a means of improved access for obtaining information on theses and dissertations in education completed at the University of Alberta during the period 1929 - 1967. This information may be obtained according to one or a combination of the following dimensions:

1. Author
2. Academic degree earned
3. Year of acceptance
4. Area and subject investigated
5. Department in which the research was undertaken
6. Research design

The employment of McBee Keysort Cards allows for an effective and economical means of organizing a multi-dimensional classification system inasmuch as there are no restrictive, complex procedures required in searching the system, thus obviating the need for specialized personnel.

Theses abstracts on the cards permits one to survey a greater quantity of information while reducing the amount of time to keep informed. All information in this system is conveniently stored in a central data bank and may be retrieved from the central files at the moment one has need of it, thus greatly increasing the probability that this information will be used effectively.

The multi-dimensional aspect of this classification system permits a ready analysis of past trends in the writing of theses and dissertations at the University of Alberta.

Suggestions for Further Study

A number of possibilities for further investigation arise from this study. It should be profitable to include all theses and dissertations completed in Canada in a

similar multi-dimensional classification system. Similar projects could be planned for multi-dimensional classifications of research other than theses and dissertations.

While there are many possible uses for McBee Keysort Cards, it must be remembered that the processes involved are still manual. Consideration should be given to developing electromechanical or electronic methods for multi-dimensional classification systems.

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BIBLIOGRAPHY

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APPENDIX A

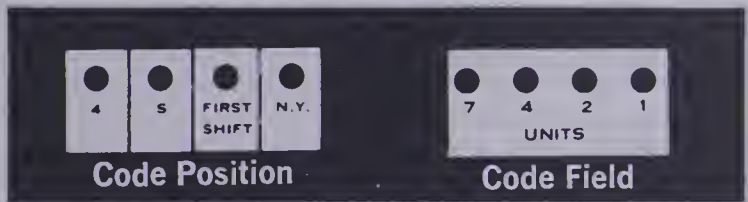
ROYAL McBEE KEYSORT MANUAL

KEYSORT NOTCHING and SORTING MANUAL

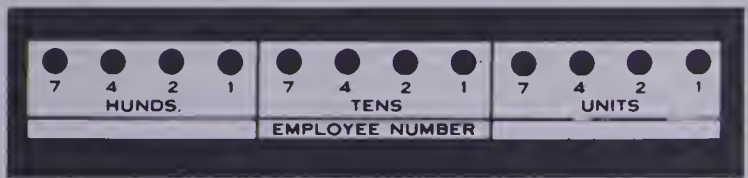
A McBEE  CUSTOMER SERVICE

Coding

The marginal holes on KEYSORT cards are known as *Code Positions*, *Code Fields*, or *Code Sections*. A *Code Position* is a single hole assigned to a number, letter or word. A *Code Field* contains one or more *Code Positions* relating to a single subject or classification.



A *Code Section* contains one or more fields relating to the same subject. For example, a numerical *Code Section* contains a *Code Field* for each digit of a number. Each of the digits is usually identified in its own *Code Field* with its position in the series. That is, the first *Code Field* of a three-digit number is identified as "hundreds," the second field as "tens," and the last field as "units."



Requirements of the particular job determine the coding to be applied to the KEYSORT card. The two primary types of KEYSORT codes are the *Direct Code* and the *Numerical Code*.

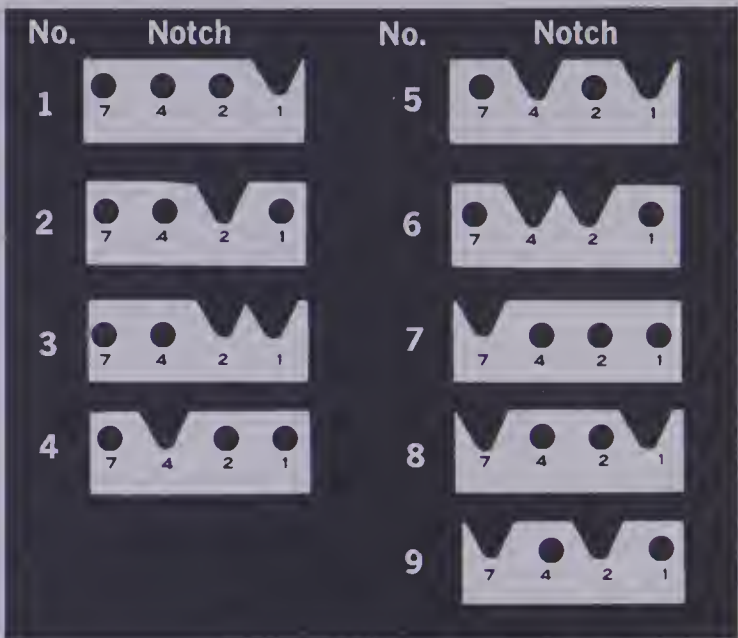
Direct Code

A specific classification, such as First or Second (Shift) is assigned to a hole.

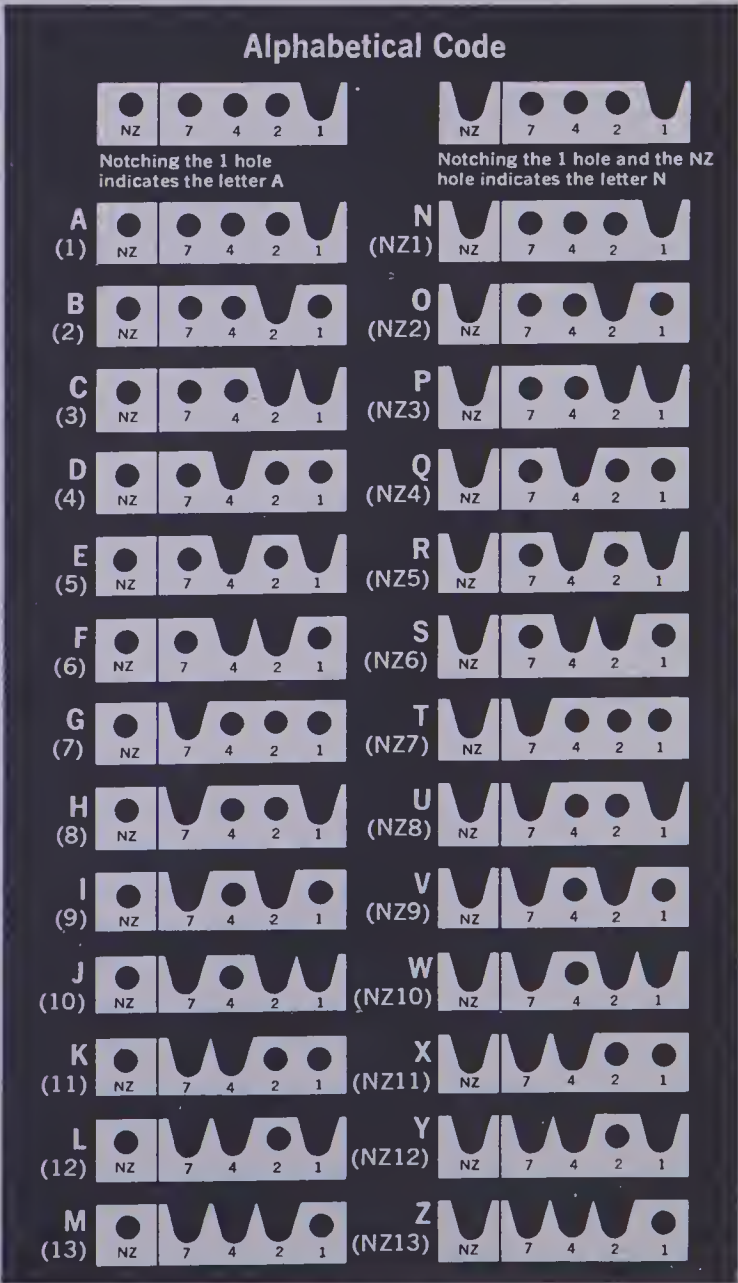


Numerical Code

To save space on a card, and time in notching and sorting, KEYSORT systems use a special numerical code system. Only four holes are used for each set of numbers from 0 through 9. These four holes are assigned the values of 7, 4, 2 and 1. By notching either a single number or a combination of two numbers, any number from 1 through 9 may be expressed. Ciphers are not notched.



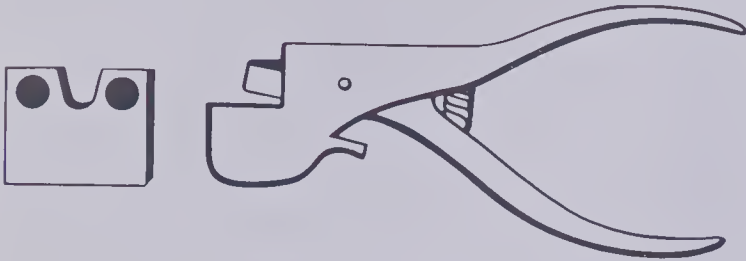
KEYSORT cards can also have alphabetical coding.



Notching

Hand Notching

Code positions are notched individually when volume of cards is small, when speed is not an important factor—or to make a correction.



Model #5201 KEYSORT Hand Punch

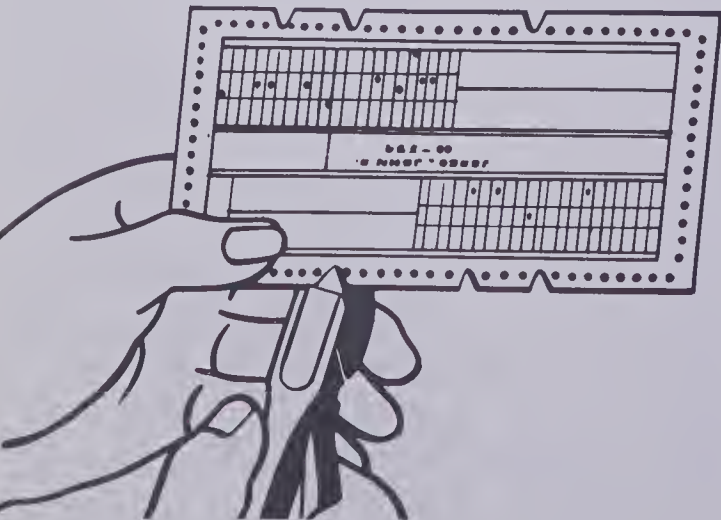
This punch cuts a V shaped notch for single-row coding.

Technique

1. Hold card with thumb and forefinger of left hand, close to position to be notched.
2. Hold punch in right hand, rest chip receptacle on last three fingers of left hand.
3. Card edge must rest squarely against the guide back of the cutting blade.

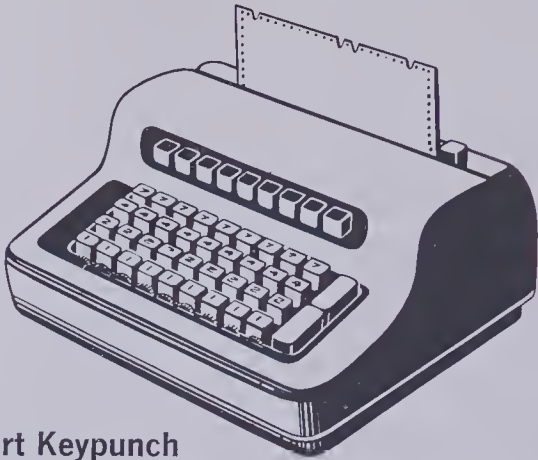
Procedure

1. When learning, it is best to mark the code positions to be notched with a red pencil. As proficiency is gained, this can be eliminated.
2. Locate information and codes to be notched on the card.
3. Locate related code sections or fields along the edges of the card.
4. To notch top edge, turn card upside down.
5. Begin notching at upper left code field (now in lower right edge).
6. Notch codes from right to left, around the four edges of the card.



Machine Notching

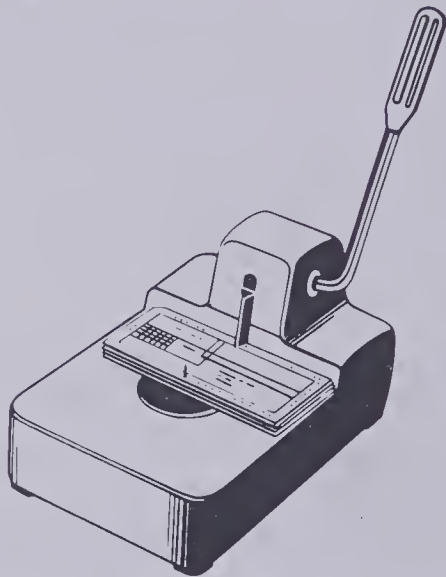
Keypunching is used for high speed notching when codes vary from one card to another.



Keysort Keypunch

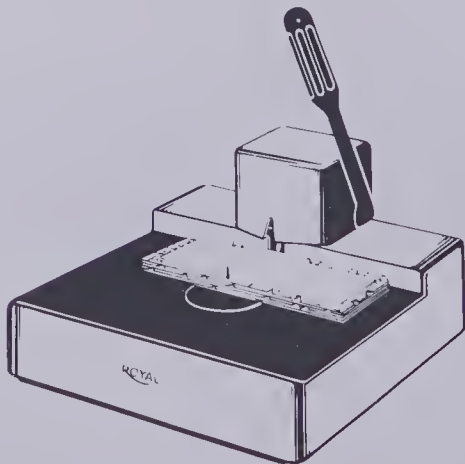
Model 6145 Manual; Model 6146 Electric

The KEYSORT Keypunch notches one entire side of a card at a time.



Keysort Groover — Model 6203

This desk model is for notching a group of cards having a common code. Capacity is 45 cards at a time.



Keysort Groover — Model 6210

This model can groove a maximum of 85 cards in one operation.

Sorting

Equipment

The KEYSORT Sorting Needle is a steel needle set in a plastic handle. One style is made with the needle permanently attached to the handle, while the other style is made with a screw collet which permits adjusting the length of the needle. When the latter is used, the length of the needle should be adjusted to provide the greatest ease and speed in sorting. As a rule, however, the needle should be shortened to handle unusually large or unusually small cards.

The Alignment Block increases the speed and ease of sorting. The drop front guide fits flush against the front edge of a desk. The vertical side guide on the right is used for aligning the cards.

General Guideposts in Sorting

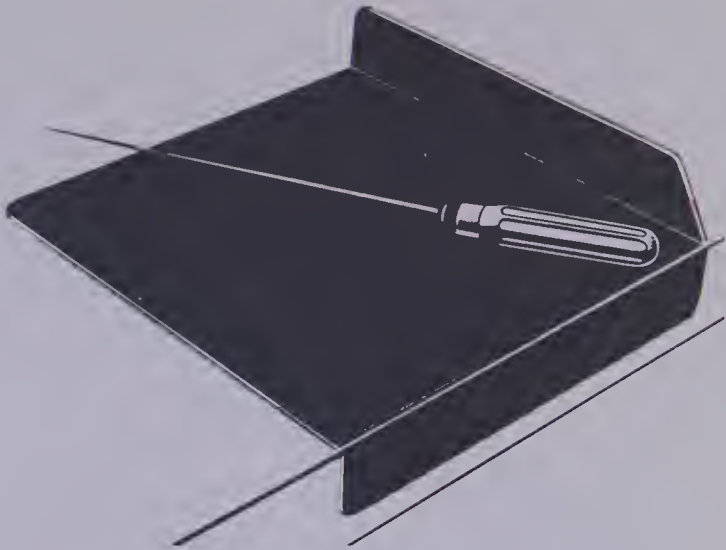
There are several pertinent factors in KEYSORT sorting procedures with which all operators should be thoroughly familiar. They are most important in acquiring a smooth, efficient technique. These factors apply to any size or shape of KEYSORT record and should be constantly remembered by the operator.

1. **Always use an Alignment Block.** It is a most important part of the KEYSORT equipment and is essential to achieving speed and card control.
2. **Keep the KEYSORT Needle handle in the palm of the hand.** The fingers should never touch the needle while sorting.
3. **Keep wrist relaxed and flexible.** Tenseness slows the sorting operation and affects card control.
4. **Keep the hands and fingers relaxed.** This is essential for all steps of the sorting technique, but especially so in step #8 in Basic Technique. Too much tenseness or too tight a grip may cause a slight tearing out of the holes.
5. **Keep the KEYSORT Needle parallel with the tray of the Alignment Block.** This is essential to maintain the air space between the cards which allows the notched cards to fall out easily.
6. The recommended height for the notching or sorting desk is 26" to 28" from the floor. Proper desk and chair height is essential to the best notching and sorting technique.

With these factors in mind, sorting by the KEYSORT method is simple and easy for anyone to learn.

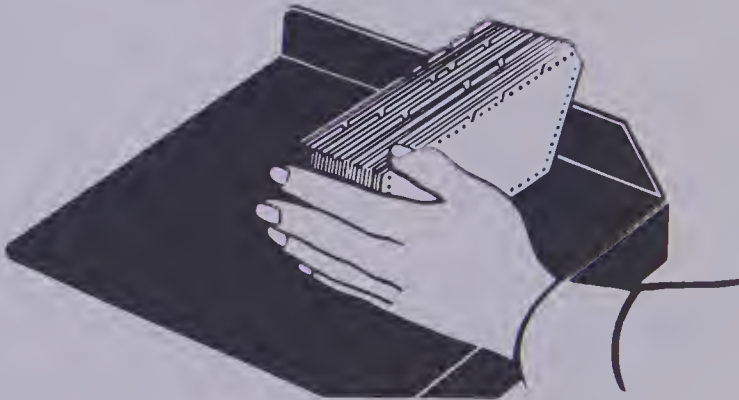
Basic Technique

A new operator can quickly attain a high degree of sorting efficiency without previous experience or mechanical aptitude. It is merely necessary to follow certain basic principles and techniques.

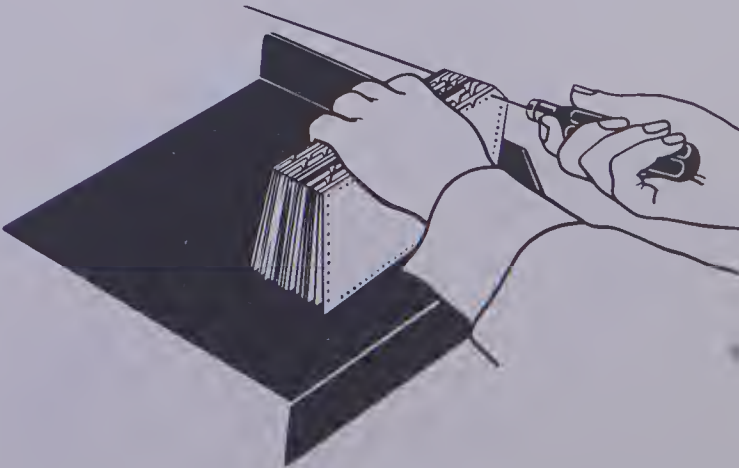


Sorting the Long Side

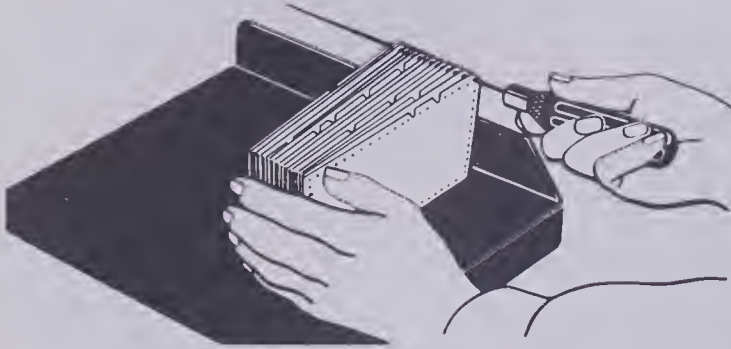
1. Place a convenient handful of cards (approximately 1" or slightly larger) on the Alignment Block with the front of the cards facing the operator and the side to be sorted at the top.
2. Holding the cards loosely with the left hand, jog them against the guide of the Alignment Block.



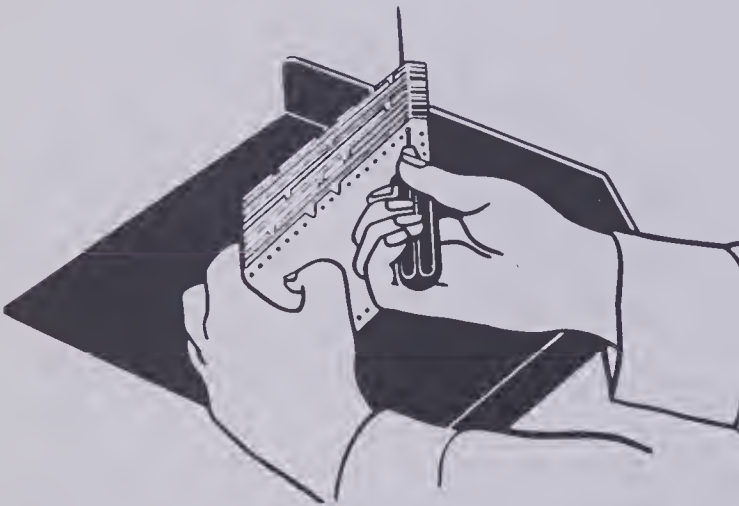
3. Grasp the cards close to the position to be sorted.
4. Hold the handle of the KEYSORT Needle firmly with the right hand. Keep the fingers away from the needle at all times.
5. Insert the needle in the position to be sorted until the front card is approximately one inch from the handle.



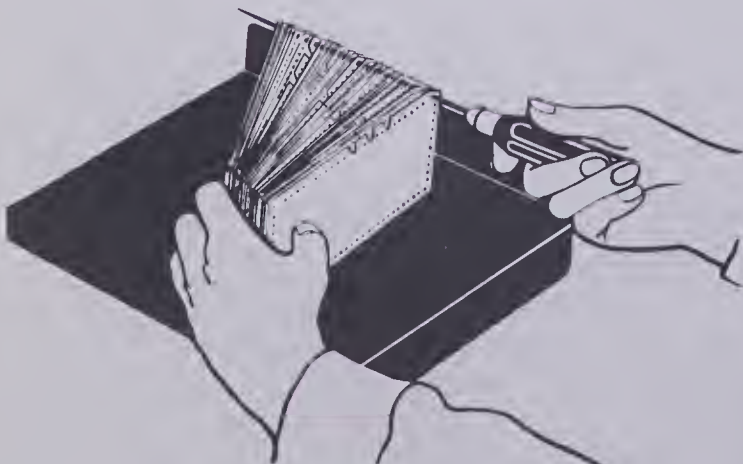
6. Slide the left hand to the left side of the cards. Hold them lightly with only slight pressure of the thumb and fingers against the cards.



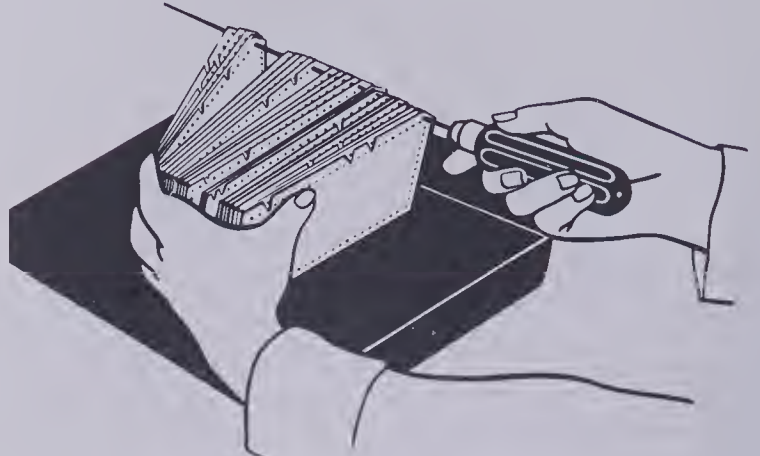
7. Move the handle of the KEYSORT Needle to the left and at the same time move the cards to the center of the Alignment Block. Hold the cards with the left hand. Exert pressure with thumb in the lower left corner.



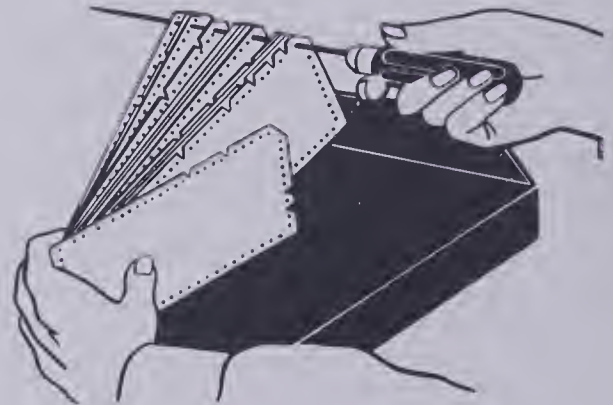
8. Swing the KEYSORT Needle to the right until resistance is felt. This will cause the cards to spread out on the needle. For sequence sorting (see following section), release the pressure of the left hand. Spread the fingers to balance the cards that will fall.



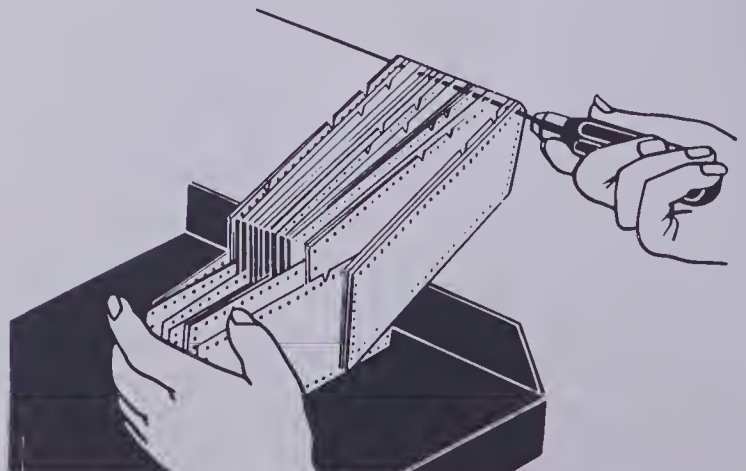
9. Lift KEYSORT Needle slightly—approximately one-half inch from the Alignment Block. Strike the cards several times against the guide of the Alignment Block, at the same time gently raising the KEYSORT Needle away from the cards that are falling.



10. If some cards stick and do not fall, grasp all the cards, placing the thumb and fingers in the upper left-hand corner of the cards that are still on the needle. Move the cards towards the center of the Alignment Block. Lower right hand slightly; release the pressure of the left hand and strike the cards again to break loose those that do not fall in the first operation.



11. Lift the KEYSORT Needle to the right over the guide. With the left hand open, slide the cards that have fallen against the right guide of the Alignment Block.

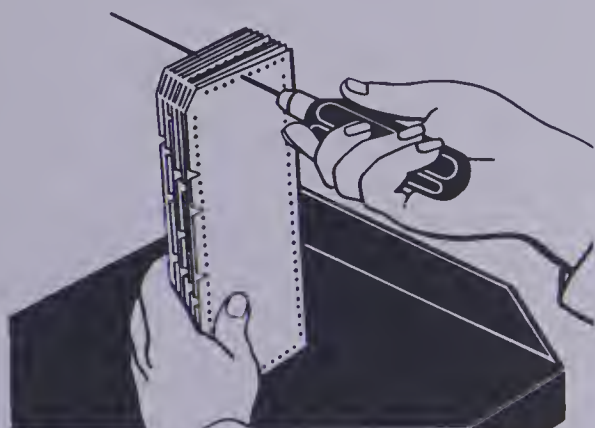


Never pull out the cards that are falling, but rather lift out the cards that are on the needle. Always keep the KEYSORT Needle parallel with the top of the desk; if tilted down, the cards will fall off the end of the needle, and if tilted up, the cards will bind together and the notched cards will not fall.

Sorting the Short Side

To sort the short side of a card the technique is slightly different from that described for the long side of the card.

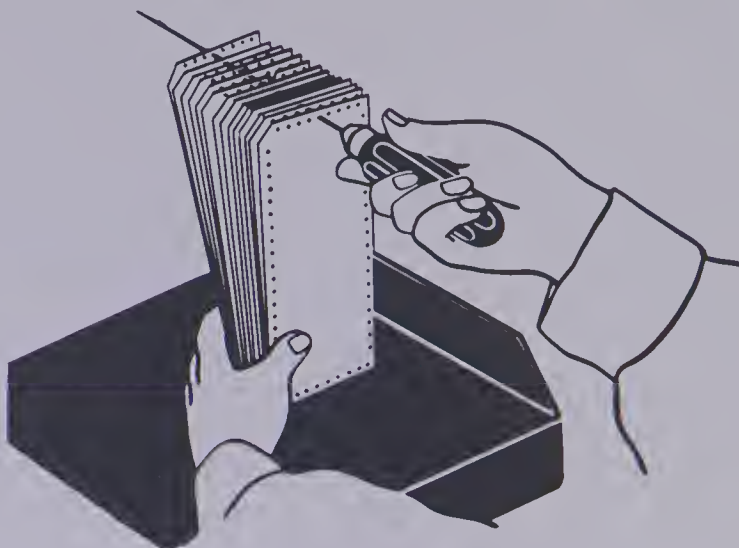
1. Follow the same procedure as described in steps #1 through #5 in Sorting the Long Side of the card.
2. Slide the left hand to the bottom of the cards. Hold them lightly with only slight pressure of the thumb and fingers against the cards. Move the cards about one inch to the left away from the guide of the Alignment Block.



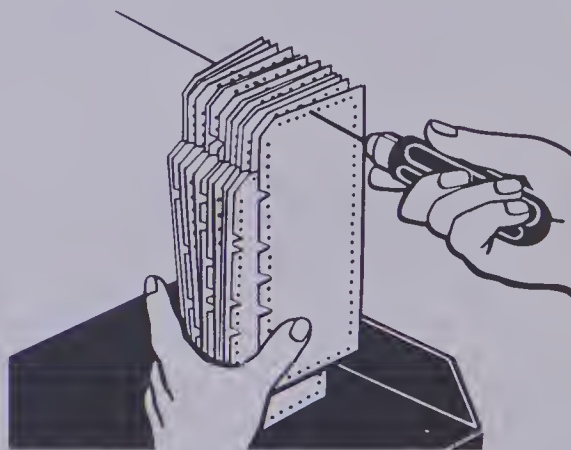
3. Lower the handle of the KEYSORT Needle and at the same time raise the batch of cards slightly off the floor of the Alignment Block so that the front cards are resting on the little finger of the left hand. Hold the cards with the left hand. Exert pressure with thumb in the lower left corner. The inside of the other three fingers should be flush against the beveled edge of the cards.



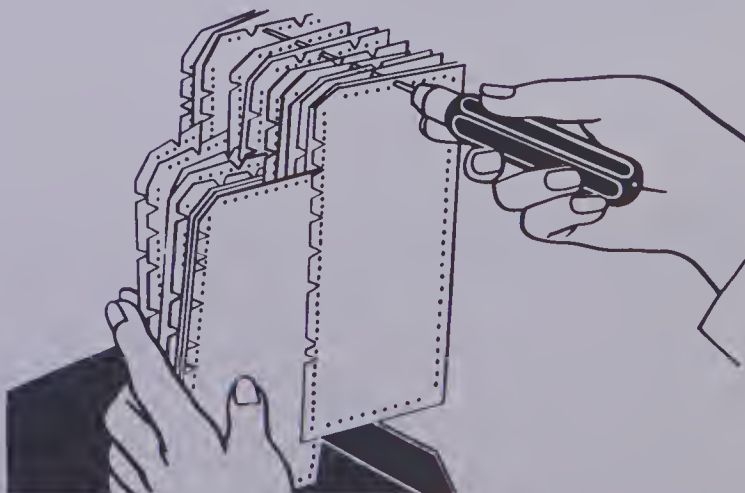
4. Raise the handle of the KEYSORT Needle until it is parallel to the top of the desk and resistance is felt. This will cause the cards to spread out on the needle.



5. Release the pressure of the left hand. Tap the lower left corner of the cards several times on the Alignment Block, shaking gently two or three times.



6. Lift the cards that are on the needle to the right over the guide.



Direct Sorting

To sort in direct code positions, insert the needle in the proper hole and follow Basic Technique. For example, if the needle is inserted in the “First Shift” position, all cards punched in this position will drop out and all “Second Shift” cards will remain on the needle.

Sequence Sorting

Sequence sorting is used to sort a convenient handful of numerically coded cards into numerical sequence. To sequence sort a batch of cards, follow the operations described under Basic Technique.

Just four sorts in each 7-4-2-1 field will arrange the cards in numerical sequence. Always sort from right to left. First, sort in the 1 position of the units field and place the cards that drop to the rear of those that remain on the needle.

Before removing the KEYSORT Needle, jog all cards against the guide of the Alignment Block and let the needle fall into the grooves of the cards in the rear.

Then remove it.

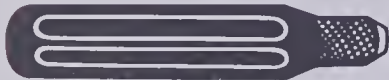
In the same way, sort in the 2 position, then in the 4 position, and, finally, in the 7 position of the units field. Continue sorting all remaining digits (the tens digit, the hundreds digit, etc.) until the handful has been completely sorted into numerical sequence.

In sequence sorting, it is vitally important that all cards drop in the same relative position to one another that they originally held in the batch. Thus, if it is believed that some have not dropped, strike them against the guide of the Alignment Block as explained in Operation No. 9 of Basic Technique, prior to the removal of the needle. If a card unavoidably falls out of its proper sequence, place it to one side and insert it in its proper place when the sort is completed.

If sequence sorting is interrupted, the furthest clear groove in the rear of the batch being sorted will indicate the last position that was sorted. To resume sorting, start with the next position to the left of this clear groove.

How Keysort Works for Sequence Sorts

7 3 4 8 6 9 5 2 1 0



7 4 6 9 2 0 3 8 5 1


Taking numbers 0 through 9 — mix well

Sort through “1” and these cards fall

Place these cards to back of handful

They are now in this order

7 4 6 9 2 0 3 8 5 1




7 4 0 8 5 1 6 9 2 3

Sort through “2” and these cards fall

Place to the back

Cards are now in this order

7 4 0 8 5 1 6 9 2 3




7 0 8 1 9 2 3 4 5 6

Sort through “4” and these cards fall

Place to the back

Cards are now in this order

7 4 0 8 5 1 6 9 2 3



0 1 2 3 4 5 6 7 8 9

Sort through “7” and these cards fall

Place to the back

Cards are now in numerical sequence

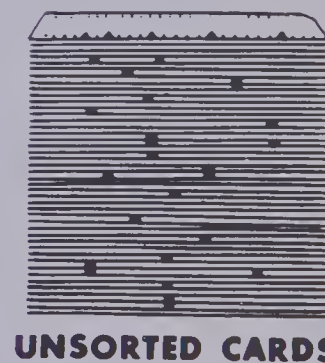
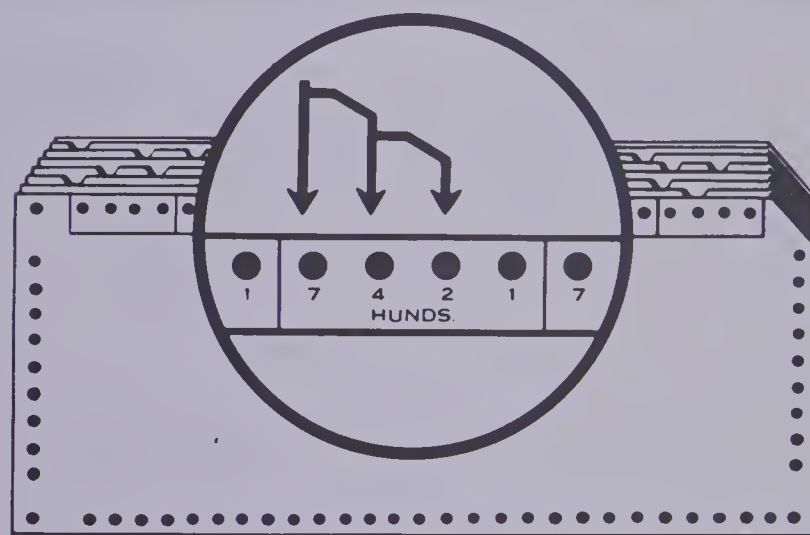
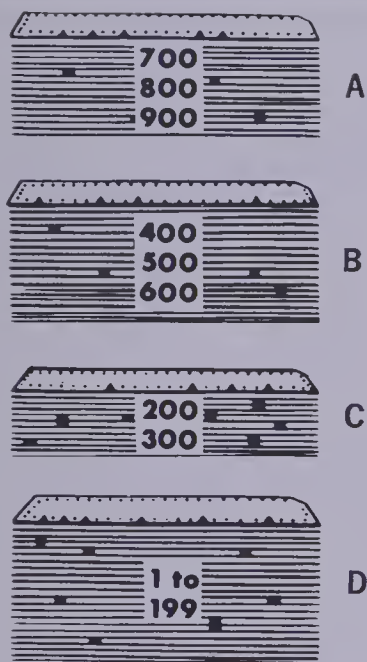
Breakdown Sorting

This method of sorting is used to subdivide a large quantity of cards into convenient handfuls for sequence sorting.

Assume that thousands of cards numbered from 1 through 999 are to be sorted into numerical sequence. The numbers on the cards will be all mixed up. For example, reading from the top, the number on each succeeding card might be 256, 21, 875, 12, etc. Before this batch of cards can be sequence sorted, it must be divided or broken down into smaller batches of convenient handfuls.

To Break Down the Hundreds Field

Stack the cards to be sorted on the right side of the table. Take as large a handful of cards as possible. Usually twice as many cards can be handled as in sequence sorting, but the quantity will depend on the size and weight of the cards. *In breakdown sorting, always start sorting in the extreme left-hand position of the classification to be sorted.* In the example given, the 7 of the hundreds field is the starting position.



Insert the needle in the 7 position of the hundreds field and follow Basic Technique. All 700, 800 and 900 cards will drop. Place these cards in Group A.

Sort the balance of the handful in the 4 position of the hundreds field. All 400, 500 and 600 cards will drop. Place these cards in Group B. Sort the balance of the handful in the 2 position of the hundreds field. All 200 and 300 cards will drop. Place these cards in Group C. Place the remaining cards, or those numbered from 1 through 199, in Stack D.

In this manner continue to sort large handfuls of cards in the hundreds field until all cards are arranged in the four groups.

To Break Down the 700—800—900 Stack

Take a handful of cards from the 700—800—900 group. Sort in the 2 position of the hundreds field. All 900 cards will drop. Place these in a stack.

Sort the balance of the handful in the 1 position of the hundreds field. All 800 cards will drop. Place these in a stack. Place the remaining 700 cards in another stack. In this manner continue to sort large handfuls of cards of the 700—800—900 group until they are arranged in the three stacks.

To Break Down the 900 Stack

Take a handful of cards from the 900 stack and sort in the 7 position of the tens field. All 970—980—990 cards will drop. Place these in a stack. In this manner continue to sort large handfuls of cards of the 900 stack.

Special Instructions

Upon completion of the initial Breakdown Sort—move the stacks of cards to the right of the alignment block.

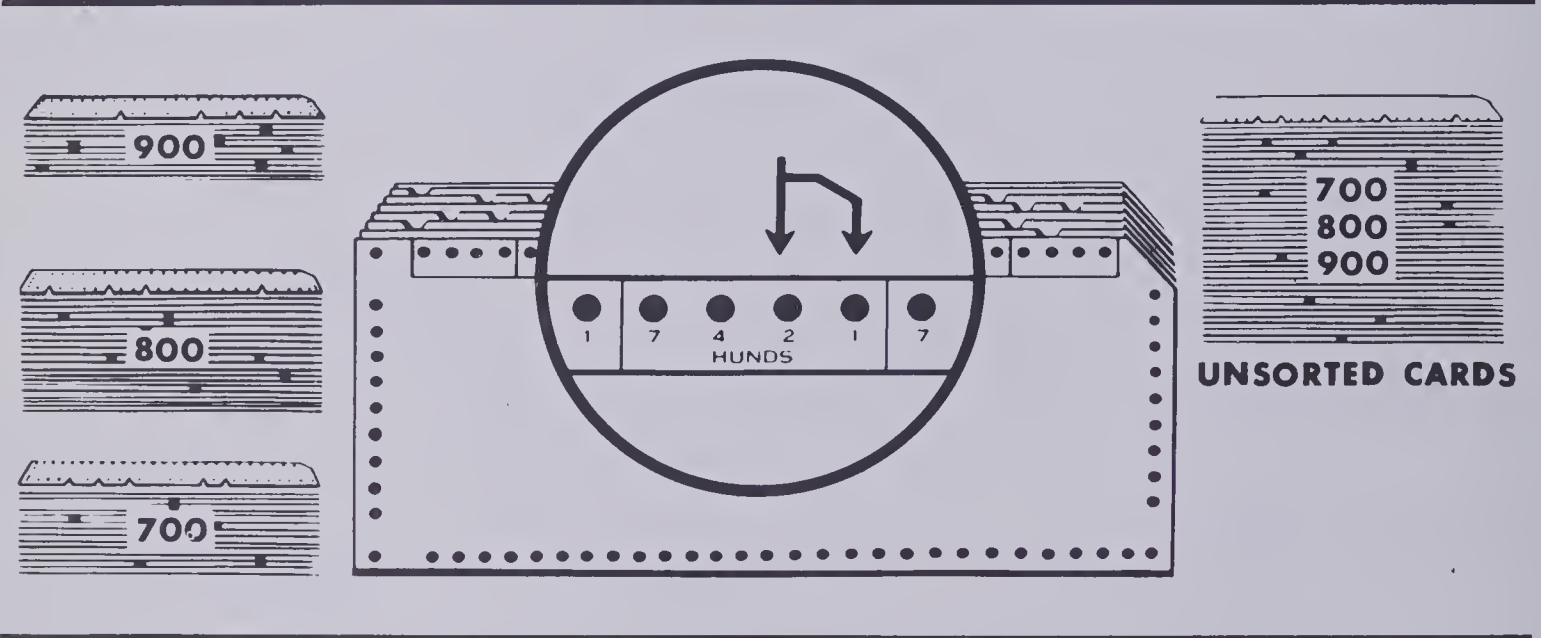
Make sure they are in the sequence in which they will be sorted.

Complete sorting the 700—800—900's into final sequence.

Now—finish sorting the 400—500—600's into their final sequence. Then—sort the 200—300's and finally the 100's and less than 100.

Remember always to keep a well-organized sequence when moving cards from left to right of the Alignment Block so as not to mix the groups or stacks of cards. Breakdown sorting may be continued by applying the same principles just described. Merely continue to break down each stack until convenient handfuls are obtained. Then sequence sort from right to left up to the position where the last breakdown sort was made.

These two rules are extremely important: (1) Always sort each new handful of cards in the same positions as the previous handful, and (2) Whenever possible, combine small stacks to make a convenient handful for sequence sorting.



McBEE 

AUTOMATED BUSINESS SYSTEMS DIV. OF LITTON INDUSTRIES
600 WASHINGTON AVENUE, CARLSTADT, NEW JERSEY 07072

APPENDIX B

A CLASSIFICATION OF THESES IN EDUCATION
COMPLETED AT THE UNIVERSITY OF ALBERTA

A CLASSIFICATION OF THESES IN EDUCATION

COMPLETED AT THE UNIVERSITY OF ALBERTA

1929 - 1966

(Third Revised Edition)

This project is an attempt to list and classify all theses and dissertations in Education completed at the University of Alberta during the past thirty-seven years. Provision has been made for future theses to be added as completed and also to open up new classes (such as computer science) as studies in these areas are developed. Brief statements appear under main headings suggesting areas where research may be undertaken by graduate students. The difficulty in classifying each thesis under one, and only one, heading is readily apparent and there is an immediate need for a multi-dimensional classification system. However, the present method used does provide a ready reference for students wishing to survey the local literature in any particular area, and does provide an up-to-date listing of the five hundred eighty theses now in the Faculty of Education Library. Suggestions for modification and improvement are welcome.

Wm. D. Knill

A. Kowalski (1964)

M. Scharf (1965)

G. Cathcart (1966)

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I. Curriculum

What are some of the varying community needs in terms of curriculum? What is the status of instruction in the areas of reading, arithmetic, manipulative skills, social studies, health, art, music and other fields? What directions are junior high school curricula taking? What occupations are Alberta graduates entering? What trends would be revealed by migration studies of Alberta high school graduates? What patterns exist in high school graduation requirements?

The following material is a partial breakdown of study areas for attempts to answer these questions and a listing of studies made at U of A that bear on the issues.

A. Subject Areas in the Elementary and Secondary Schools

1. (Mathematics)

Analysis of instructional material on the
bases of utilization of optimum age data
on placement of social utility content
Current methods of instruction - prevalence
of functional problem approach
Teacher preparation
Study of the effectiveness of workbooks
in teaching arithmetic
Status of "number readiness" of entering
first grade children - urban and rural
differences

BALE, D.J. A Comparison of Programmed and Conventional
Mathematics Enrichment Materials Over Two Grade Seven
Mathematics Achievement Levels. M.Ed. 1966

BIAMONTE, A.L. An Analysis of the Edmonton Test of Equiva-
lence in Mathematics M.Ed. 1952

BUCKLES, I.E. The Evolution of the Mathematics Programme
in Alberta High Schools M.Ed. 1956

CHARYK, J.C. Aids to the Study and Understanding of High
School Mathematics M.Ed. 1949

CLARKE, S.C.T. Clear Thinking Through Geometry M.Ed. 1943

CLIMENHAGA, C.E. A Survey of Arithmetical Achievement of
Grade VIII Pupils in Alberta Schools M.Ed. 1955

COOPER, W.H. A Study of 1940 Grade IX Examination Answer
Papers in Algebra and Geometry M.A. 1941

- COTSMAN, A. An Analysis of Crawford's High School Algebra, the Authorized Text in Algebra I, in the Secondary Schools of Alberta M.A. 1930
- DONEY, O.J. The Construction of an Arithmetic Survey Test for Use in the Edmonton Public Schools M.Ed. 1952
- DUCHAK, J.E. The University of Alberta Matriculation Standards of Algebra 2 Students as Determined by the 1948 Midsummer Examination M.Ed. 1949
- FADUM, O.E. A Diagnosis of the Achievement of a Sample of Alberta Grade 8 Pupils in Solving Arithmetic Problems M.Ed. 1956
- FORNWALD, J.J. Concepts of Number of Grade I Students M.Ed. 1965
- FRENCH, G.C. An Analysis of the Introduction and Book I of the Text "High School Geometry" by A.H. McDougall and R.S. Sheppard M.A. 1930
- FRENCH, G.C. A Determination of Generalizations Basic to the Mathematics Curricula of the Intermediate and Senior High Schools of Canada M.Ed. 1944
- HALL, L.G. A Diagnosis of Difficulties Encountered in the Lazerte Survy Tests in Arithmetic B.Ed. 1942
- HARRISON, D.B. An Analysis of the Effictiveness of Three Mathematics Programs at the Grade Eight Level M.Ed. 1965
- HARVEY, J.E. The Growth of Mathematical Abilities in Grades VII to XI of the Secondary Schools M.A. 1936
- HORD, M.V. An Experiment in the Elements of Problem-Solving M.A. 1933
- HOOPER, S.W. A Report on the Algebra 3 Paper of June 1938 M.A. 1941
- ISSAC, J. Factors Affecting Achievement in Mathematics: A Survey of the Literature M.Ed. 1959
- KOSTASH, W. A Diagnostic Survey of the Answers to the Mathematics Survey Test of June, 1940 B.E. 1941
- KRIDER, E.A. An Experimental Comparison of a Traditional and a Modern Course in Algebra at the Grade Ten Level M.Ed. 1965

- KUNELIUS, L.W. Basic Concepts in Algebra 1 - An Interpretation of the Course of Studies in Algebra 1 Giving Major Emphasis to Understanding of Basic Concepts Rather Than to Manipulation of Algebraic Numbers and Symbols M.A. 1938
- LAWS, E.A. An Investigation into the Knowledge of Mathematics of Alberta Students, Based on the Grade Nine Departmental Examination Written in June, 1960 M.Ed. 1962
- LINDBERG, E.B. An Investigation of a Remedial Arithmetic Program in Eight Grade Eight Classes in the Edmonton Public School System M.Ed. 1953
- McKAY, J.A. An Analysis of Abilities and Difficulties in Geometry 1 as Taught in Alberta High Schools M.A. 1933
- MASSING, O. A Determination of Generalizations Basic to the Mathematics Curricula of the Intermediate and Senior High Schools of Canada M.Ed. 1945
- MILLER, V.I. Student Attainment in Algebra 2 Examinations of 1944 M.Ed. 1946
- MILLER, H.E. Graphs in General Mathematics M.A. 1941
- MILLER, H.E. A Report on the Algebra 2 Papers of 1940, 1941, and 1942 M.Ed. 1943
- MUIR, N.D. A Comparison of the Competence in Algebra of the Grade IX Students of the Edmonton Public Schools in 1938 and 1959 M.Ed. 1960
- NELSON, G.M. Enrichment Studies in Mathematics for Gifted Students in Grades 9 and 10 in the Small High School M.Ed. 1963
- PALLESEN, L.G. An Investigation of the Reasoning Processes Employed in a First Course in Demonstrative Geometry By Alberta High School Students M.Ed. 1943
- PAULSON, M.J. An Investigation of the Standard of Achievement at the Lower Limit of the B Group in Grade IX Mathematics in June, 1948 M.Ed. 1949
- PELLETIER, J.D.M. A Study of Grade One Children's Concepts of Linear Measurement M.Ed. 1966
- PETA, S.B. An Evaluation of Arithmetical Competence in the Junior High Schools of Lethbridge M.Ed. 1956

- PRITCHARD, R.O. A Survey of the Arithmetical Achievement
of Grade Five Pupils in Alberta Schools M.Ed. 1955
- REMAI, H.A. An Experimental Investigation Comparing
Attitudes toward Mathematics of Modern and Traditional
Mathematics Students at the Junior High School Level
M.Ed. 1965
- ROBINSON, F.G. The Psychological Basis of Axiomatic
Mathematics Ph.D. 1959
- SAWADA, D. Transformations and Concept Attainment: A
Study of Length Conservation in Children M.Ed. 1966
- SEWARD, R.K. Relationship of Mathematical Ratios to
Verbal Analogies M.Ed. 1966
- SPARBY, H.T. An Experimentally Determined Technique for
Correspondence School Instruction in Mathematics
M.A. 1939
- SWIFT, W.H. An Investigation of Abilities of Grades 4, 5,
and 6 Pupils in Solving and Analyzing Problems in
Arithmetic B.Ed. 1930
- TANNER, H.E. The Relation Between Problem Solving Ability
in Grade V Arithmetic and Each of the Variables Sex,
Chronological Age, and Mental Age M.A. 1932
- TYLER, F.T. Instructional Tests in Graphs M.A. 1938
- WORBETS, W.T. Comparison of Problem-Solving Proficiency
of Grade Nine Students in Four Different Mathematical
Programs M.Ed. 1966

2. (Art Education)

Philosophy or Theory Underlying Art
Education

Historical Development of Art Education
in Alberta (Canada)

Technical (materials and techniques)

Organization of Curricula, programs, etc.

Adequacy of present courses of study in the
areas of form, color, and design

Status of integration of art with other
subjects

Survey of methods of art instruction to
include:

- a. time allotment--separate periods or
periods integrated into other subjects
- b. methods used in teaching techniques
- c. methods used to encourage creativity
among children
- d. content of present-day "appreciation"
programs

- CHARLES, H.J.D. An Evaluation of Some Aspects of Art Education in the Province of Alberta M.Ed. 1958
- FORBES, J.A. Art Education - Its Cultural Basis, Its Development, and Its Application in Alberta Schools M.Ed. 1951
- FORD, R.G. A Study of Organization for Art Instruction in the Elementary Schools of Alberta M.Ed. 1965
- MacGREGOR, R.N. Some Effects of Imposed Controls in Subject Matter and Art Media Choice Upon the Drawings of Senior High School Students M.Ed. 1966
- SISTER HELEN VIRGINIA A Bibliographical Study of the Evaluation of Modern Art and Its Influence on Art Education Today M.Ed. 1960

3. (English - Language, Grammar and Composition)
 Methodology trends
 Effectiveness of language instruction in realizing aims of language as a social instrument
 Time-allotment patterns
 Uniformities in instructional patterns
 Adequacy of preparational patterns of teachers
 Adequacy of materials of instruction
 Extent of devotion of time to developing creative writing
 Status of the integration of the teaching of language skills with content subjects
 Allotments of time to the teaching of grammar
 Status of the teaching of grammar--functional approaches--isolated drill approaches
 Division of time--time spent on the writing of reports, stories, poems, essays, (creative efforts) as compared with time spent in drills, tests, and so on.

- AMBURY, H.G. A Bibliographic Survey of the Literature Concerning the Place of Grammar in the Teaching of English Language in the Junior and Senior High Schools M.Ed. 1963
- BELL, J.B. An Experiment in Textbook Selection for Grade X Language M.Ed. 1962
- BLISS, E.H. A Study of Objectives and Procedures in Teaching of Literature in Seventy Junior High School Classrooms in Alberta M.Ed. 1963

- BURCH, H.M. A Study of the Poetry Taught in Division One
in the Schools of Alberta M.Ed. 1962
- CHALMERS, J.W. A Study of the Relationship Between Ability
in Formal Grammar and Ability in Literary and Linguistic
Fields M.Ed. 1941
- CHALMERS, J.W. A Study of the Effective and Recognized
Vocabularies of Alberta Students in Grades VIII to XII
M.A. 1935
- CHAPMAN, R.S. A Study of Achievement and Under-Achievement
in English Language X in an Alberta Composite High
School M.Ed. 1958
- CHORNY, M. A Survey of the Teaching of English Composition
in Grade Nine, Eleven, and Twelve in Alberta, 1960
Ed.D. 1966
- CLARKE, S.C.T. How to Mark English on Grade IX Mathematics,
Science and Social Studies Papers M.A. 1940
- CONN, G.M. Vocabulary Proficiency of Bilingual Grade Nine
Students in Beaver County of Alberta M.Ed. 1964
- CONQUEST, G.R. A Survey of English Language Achievement
in Grades Four and Seven in Selected Alberta Schools
M.Ed. 1954
- COSSITT, T.G. A Linguistic Analysis of Social Studies
Texts M.Ed. 1966
- ELLIOTT, A.H. Some Effects of Programmed Instruction on
Grade 8 Language M.Ed. 1963
- EPHRAM, B. A Study of the Effects of the Part I A Marks
of the English 3 Examination on the Distribution of
the Total Marks in English M.Ed. 1944
- FITZPATRICK, W.J. The Nature of Sex Differences in
Spelling as Evidenced by Canadian Children's Free
Writing M.Ed. 1960
- GODWIN, L.R. An Analysis of the Sentence Structure and
Paragraph Writing of City of Calgary Students in
Grades V, VIII, XI M.Ed. 1955
- GOODWIN, L. Attainment in English of Matriculation
Candidates of the Various Provinces of Canada
M.Ed. 1945
- GRAY, M.E. An Analysis of Language Themes in Grade Five,
Grade Eight, and Grade Eleven M.Ed. 1959

- HAWRELKO, J. An Investigation to Determine the Relationship of Certain Factors Other Than Intelligence to Student Achievement in Literature 20 M.Ed. 1962
- JONES, E.A. An Investigation of the Relationship Between Written Composition and Reading Ability and Reading Habits M.Ed. 1966
- KARVONEN, A. Effects of Grouping For Instruction In Spelling From Grade Two to Grade Six Inclusive M.Ed. 1966
- LOBAY, M. An Appraisal of an Eclectic Approach to the Teaching of Grammar in the Junior High School M.Ed. 1966
- McEACHERN, M.D. An Investigation into the Growth of Language Concepts in History of Bellevue Intermediate and High School Students M.A. 1937
- McKAY, D.P. A Study of the Spelling Achievement of Rural High School Pupils M.Ed. 1959
- McKIE, F.I. An Analysis of the Characteristics of Free-Writing by Grades 4, 5 and 6 Students M.Ed. 1963
- McLEAN, J.H. An Investigation into the Growth of Language Concepts in Science of Bellevue Intermediate and High School Students M.A. 1937
- MERSEREAU, M.G. A Survey of the Instructional Procedures for the Teaching of the Shakespearean Drams in English 30 M.Ed. 1963
- PARKER, P.E. A Comparison of Student Efficiency in English Grammar with that in Two Other Selected Subjects of the High School Course B.Ed. 1941
- PHIPPS, W.L. A Descriptive Study of the Teaching of English Language 21 (Creative Writing) M.Ed. 1963
- PLENDERLEITH, W.A. Experimental Work on the Analysis and Classification of Specific Abilities in English Composition M.A. 1935
- RAMSEY, L.D. The Meaning of the Literature Appreciation Mark on the Division II Report Card of the Edmonton Public School System M.Ed. 1963
- REID, T.J. A Survey of the Language Achievement of Alberta School Children in Relation to Bilingualism, Sex and Intelligence M.Ed. 1954

- ROBINSON, C.H. A Study of the Written Language Errors of
1238 Pupils of Ukrainian Origin B.Ed. 1934
- SANGSTER, C.H. An Evaluation of the Efficiency of a
Standardized Test of Language M.Ed. 1956
- SAWICKI, S.W. The Development of the English Program in
the Secondary Schools of Alberta M.Ed. 1958
- SCHMIDT, O.R. Social Values Inherent in the Short Stories
in the High School Program M.Ed. 1950
- SKUBA, M. An Analysis of English Errors and Difficulties
Among Grade Ten Students in the Smoky Lake School
Division M.Ed. 1955
- SMITH, H.M. An Investigation of the Standard of Achievement
at the Lower Limit of the "A" Group in Grade XII English
in June 1948 M.Ed. 1950
- SULLIVAN, D.M. An Investigation of the English Disabilities
of Ukrainian and Polish Students in Grades 9, 10, 11,
12 of Alberta School M.Ed. 1946
- TILBROOK, J. The Influence of British and American Usage
on the Spelling Preferences of Grades VI, IX, and XII
Students in South-Central Alberta M.Ed. 1965

4. (Handwriting)

Place of manuscript writing--practices in
schools

- a. speed and legibility of writing of
pupils who have retained manuscript
form as opposed to speed and legibility
of those who have made transformation
in second or third grades
- b. times at which transfers from manuscript
to cursive writing are most commonly
made

- MacKAY, M.D. A Study of Handwriting in Grades 4, 5 and 6
in Alberta M.Ed. 1962

5. (Health Education)

Prevalence of illness, physical defects
 accidents criteria applied to judge
 wholesomeness of school plants
 Curricula organization and relationship
 to healthful school days for children
 Nature of mental hygiene atmosphere of
 classrooms
 Scope and sequence of health curricula
 Materials for health education in use

READ, E.A. A Comparative Study of Sex Education in the
 Schools of the United States and Great Britain

M.Ed. 1940

6. (Music Education)

Status of preparation of classroom
 teachers for the handling of their
 own music
 Status of the use of special music
 teachers
 Status of instructional patterns
 Relative emphasis on music appreciation
 for all and selective organizational
 programs
 Status of the use of folk music

COUTLAS, H.D. A Study of Organization for Music Education
 in the Elementary Schools of Alberta

M.Ed. 1965

7. (Drama Education)

DUFF, E.W. The Teaching of Drama in Alberta Schools Today,
 An Evaluation

M.Ed. 1951

EVANS, B. Criteria to Evaluate Plays for Junior High
 School Classrooms

M.Ed. 1963

OLIVA, F.D. A Survey of Drama Education in Alberta
 Junior and Senior High Schools

M.Ed. 1961

8. (Physical Education)

Status of the development of health and
physical education programs in Alberta
schools

The place of special teachers

Significance of contributions of Alberta

PE programs to social adjustment

Form of organization and administration

Special adaptive activities for the
handicapped

Placement of activities at various develop-
mental levels

The training patterns of PE teachers

Administration of inter-school athletics

Practices in intramural athletics

GRIERSON, K.M. An Evaluation of the Physical Education
Facilities and Programs in Secondary Schools of Alberta
M.Ed. 1955

PERRY, J. A Proposed Program of Physical Education for
Boys in Alberta Junior High Schools M.Ed. 1953

TAYLOR, S.B. A Study of Organizational Plans for the
Teaching of Physical Education in the Elementary Schools
of Saskatchewan M.Ed. 1963

9. (Reading)

Pre-school readiness

Nature of informational programs for
parent

Differences in achievement of kinder-
garten and non-kindergarten children
in the first grade

Primary Reading

- Nature of programs providing for transition from pre-reading activities
- Patterns of using readiness tests
- Adequacy of material
- Practices in the areas of oral-silent and silent-oral methods, experience chart use, teaching of sight words, place of phonics, time allotment
- Time patterns in readiness programs before children proceed to primers or pre-primers (individual basis)
- Primary grouping practices in reading instruction
- Use and effectiveness of ungraded primary in reducing need for remedial reading

- BAYLY, A.G. An Evaluation of an Originally Organized System of Teaching Primary Reading Under Ordinary Classroom Conditions M.Ed. 1948
- BENGER, K. A Study of the Relationships Between Perception, Personality, Intelligence, and Grade One Reading Achievement M.Ed. 1966
- COLLET, L.S. A Multisensory Approach to the Learning of Symbols M.Ed. 1965
- COSSITT, M.B. A Study of Reading Achievement of Twins in Grade One M.Ed. 1966
- CUTHBERTSON, N.H. The Scope and Relative Diagnostic Efficiency of Certain Silent Reading Tests at the Elementary Level M.Ed. 1951
- FAGAN, W.T. The Functional Application of Phonic Knowledge by Grade Three and Grade Seven Pupils M.Ed. 1965
- GOULD, E.E. An Investigation into the Relationship of Rhythmic Ability and Reading Achievement M.Ed. 1966
- OLSON, A.G. An Evaluation of a Plan for Grouping Children For Reading in the Fourth, Fifth, and Sixth Grades M.Ed. 1964
- REID, R.L. Auditory Aspects of Reading Readiness M.Ed. 1962
- ROMANIUK, A. An Evaluation of the Effectiveness of the First Grade Readiness Testing Program as Used in West Jasper Place Public Schools M.Ed. 1964

Intermediate Reading

- Practices in providing for transition from primary to intermediate reading
- Practices in teaching reading skills in other content subjects such as language, science, social studies, and arithmetic
- Emphasis on change from oral to silent reading
- Methods and devices used to develop reading comprehension and speed
- Relation of phonics instruction in reading to mental age and achievement

BRETT, B.M. A Survey of the Leisure Reading of Grade Nine Students in Central High Schools of Newfoundland
M.Ed. 1964

DAWE, G.H. An Investigation Into the Relationship Between the Reading Ability of Grade IX Students and their Achievement in Each of Two Content Fields M.Ed. 1952

FISK, R.R. A Survey of Leisure Reading in Junior High Schools of Alberta M.Ed. 1961

MEE-LEE LEE The Correlates of Reading Underachievement of Junior High School Reading Underachievers M.Ed. 1964

LEHMANN, F.W. A Study of the Poetry Preferences of Junior High School Pupils in Selected Rural, Village, and Town Schools of Alberta M.Ed. 1952

ROBERTSON, J.E. An Investigation of Pupil Understanding of Connectives in Reading Ph.D. 1966

SISTER MARY BAPTISTA (Bachman) Patterns or Errors in Reading Comprehension of Grade 9 Underachieving students M.Ed. 1965

Upper-grade reading

- Extent of developmental reading programs after the sixth grade
- Time allotment for teaching reading in the content subject
- Evaluation of methods and devices used to develop reading comprehension and speed

Numbers of children reaching upper grades
without adequate reading skills
Training of upper grade teachers in teach-
ing primary reading skill

CAMPBELL, C.S.H. A Survey of Leisure Reading in the Senior
High Schools of Alberta M.Ed. 1962

SINCLAIR, M.E.G. The Relationship Between Word Fluency and
Reading Comprehension M.Ed. 1966

Remedial Reading

Programs in operation for children who
don't develop reading skills as rapidly
as the average of the class
Diagnostic testing programs
Use of the Kinesthetic method
Library provisions for remedial reading

BRADSHAW, E. Patterns of Perceptual Performance in Children
Who Are Severely Retarded in Reading M.Ed. 1963

RODGERS, D.C. Reading Retardation, Auditory Memory, and
Motivation, in Grade IV, V, and VI, Boys M.Ed. 1966

General

Methods used for selection of reading
material
Nature of use of commercially produced
teaching aids
Nature of enrichment programs for the
gifted

CALDWELL, M.A. A Survey of Methods of Beginning Instruction
in Reading From 1900-1950 M.Ed. 1959

CARMICHAEL, A. A Survey of the Achievement of Alberta
School Children in Reading M.Ed. 1954

- COULL, W.H. A Normative Survey of Reading Achievement of Alberta Children in Relation to Intelligence, Sex, Bilingualism, and Grade Placement M.Ed. 1956
- FOSTER, M.E. A Comparative Study of Reading Achievement Between Comparable Groups of Pupils in Christchurch, New Zealand, and Edmonton, Alberta M.Ed. 1961
- GLENNON, M.B. An Investigation of the Relationships Between Two Speeded Tests of Visual Motor Skills and a Measure of Reading Achievement M.Ed. 1961
- LAMBERT, W.E. Perception Tests M.Ed. 1949
- LEE, E. The Correlates of Reading Underachievement of Junior High School Reading Underachievers M.Ed. 1965
- PAULSON, B.D. An Analysis of the University of Alberta Reading and Language Centre Clinical Cases M.Ed. 1964
- PURVIS, N.M. A Survey of Second Language Programs for English Speaking Children in Grades One Through Nine in Canadian Schools M.Ed. 1961
- YOUNG, G.C. A Qualitative Analysis of Reading Achievement in Edmonton Schools M.Ed. 1956

10. (Science Education)

- Survey of the status of science teaching in the elementary schools of Alberta
- Preparation patterns of Alberta teachers for the teaching of science in the elementary grades
- Teacher evaluation of undergraduate science preparation requirements
- Status of attempts to integrate science in grades 1-12
- Inventory of pupil interest in science in Alberta
- Science attitude testing of pupils (random sampling) to determine if attitudes change as a result of planned science teaching
- Allotment of time and type of class activity in terms of student activity and teacher demonstration
- Determination of the types of science-teaching, inservice training that could be developed by teacher-training institutions

Determination of the number of schools teaching (1) chemistry, (2) physics, (3) biology, (4) earth science, (5) physical science
 In what grades is general science taught?
 How many teachers are teaching in the sciences in which they majored? minored?
 How many teachers are teaching science for which they have had no formal preparation?

ARMSTRONG, G. Development of Selected Science Concepts Through Secondary School Grades Being a Study of Grade Growth of: 1) Scientific Vocabulary
 2) Ability to Relate Science to Mathematics
 3) Use of Scientific Knowledge
 4) Scientific Attitude M.A. 1936

BARNES, F. An Investigation of the Growth of Scientific Knowledge and Concept Through the Junior High School Grades B.Ed. 1941

CHARYK, J.C. A Survey of Difficulties Encountered in Laboratory Chemistry in Alberta High Schools with Suggested Solutions, as Evidenced From a Four-Year Experiment Conducted in the Chinook High School M.Ed. 1942

DOUCETTE, A.L. An Evaluation of a New Method for Teaching the Grade IX Correspondence Course in General Science M.A. 1940

GILES, T.E. An Investigation of the Influence of Cycling of Science 10 and 20 on Achievement of Chemistry 30 and Physics 30 M.Ed. 1957

HAY, W.G. An Analysis of Departmental Examinations Papers in Physics 2, June, 1942. Based on a Sampling of 330 Answer Papers M.A. 1944

HUGHES, W.L. A Study of the Development of the Secondary School Physical Science Program in Alberta M.Ed. 1964

HUKINS, A.A. A Factorial Investigation of Measures of Achievement of Objectives in Science Teaching Ph.D. 1963

IVANY, J.W.G. A Comparison of Expository and Hypothetical Modes of Teaching Science Ph.D. 1965

JARDINE, D.H. A Review of Science 10 as a Course in Integrated Physical Science With Special Reference to Its Background, Purposes, Implementation and Classroom Presentation M.Ed. 1956

KRUGER, J.E. The Systematic Development of a Program of Extracurricular Activities in Science M.Ed. 1960

- LOUGHEED, N.E. A Determination of the Generalization in
the First Year Science Courses of Alberta High Schools
M.Ed. 1945
- MacDONALD, I.C. Effects of Growth of the Inheritance of
Learning - The meaning of the Growth of Scientific
Information for Education for the Advancement of
Scientific Knowledge M.Ed. 1956
- OLSON, O.A. A Study of Physical Science Laboratory
Facilities in Senior High Schools in Alberta
M.Ed. 1962
- RADOMSKY, S.W. A Comparative Study of the High School
Physical Science Programs for Two School Years
1935-36 and 1959-60 M.Ed. 1961
- ROSBOROUGH, A.E. A Comparison of One Hour Objective Test
and a Two Hour Essay Type Test in Physics I on the
Departmental Examinations June, 1931 B.Ed. 1933
- SHONN, F.C. An Investigation of the Extent to Which a
Student in the Intermediate School Applies the General
Principles He Has Studied Earlier to the Solving of
New Problems B.Ed. 1941
- SOPROVICH, W. Teacher Reaction Towards and Perception of
Change in Chemistry 30 M.Ed. 1966
- URDAL, L.B. An Investigation of the Standard of Achieve-
ment at the Lower Limit of the B Group in Grade XII
Physics in June 1948 M.Ed. 1949

11. (Social Studies)

Methods of selecting curricular content and
activities

Status of curricular patterns designed to
provide for acquisition of skills and
knowledge

development of critical thinking
social and personal adjustment--
cooperation, respect for others
growth in social attitudes

Time allotments and place in broad fields
and core programs

Teacher preparation

Extent of scope and sequence patterns are worked out by schools' staffs as contrasted with use of the scope and sequence of a particular text series

Use patterns of texts in social studies programs

Patterns of emphasis on current social problems of the community, state, nation, and world

Patterns of teaching current events: (a) incidental; (b) News magazines; (c) newspapers, radio, TV; (d) separate time provisions

Attitudes of teachers toward teaching certain controversial issues

Methods of teaching map concepts, graph and chart reading

- BAKER, R.L.C. A Comparison of Techniques Used to Implement a Study of Current Events M.Ed. 1963
- BARON, R.B.D. A Comparative Analysis of Grade XII Answer Papers in Social Studies of July 1944 M.Ed. 1946
- BRAINE, L.B. An Historical Survey of the Social Studies Curriculum in Newfoundland M.Ed. 1964
- BURKE, J. An Analysis of the Social Studies 3 Examination Paper of June, 1940 M.A. 1941
- BUSSARD, L.H. A Comparative Study of Social Studies Achievement of Canadian Grade XI Students M.Ed. 1944
- CAMPBELL, M.W. Economic Understanding of Grade Twelve Students M.Ed. 1965
- CHISTE, A. The Development of the Elementary Social Studies Program in Alberta M.Ed. 1963
- COUTTS, H.T. Techniques in the Teaching and Testing Themes One and Five of the Social Studies Two Course for Alberta Schools M.A. 1942
- CRAIG, J.M. An Investigation into the Relationship Between Mental Abilities, Reading Abilities, and Knowledge of Some Basic Concepts in Social Studies M.Ed. 1950
- CRAWFORD, M.R. An Investigation of the Relative Validity of Objective and Essay Type Tests in History M.A. 1933
- DUNLOP, G.M. An Investigation into Methods and Procedures in the Teaching of History in the Larger Secondary Schools of Alberta M.A. 1931

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- FAREWELL, J.S. An Investigation of the Standard of Achievement at the Lower Limit of the B Group in Grade IX Social Studies in June, 1948 M.Ed. 1949
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- MIX, L.C. An Experimental Comparison of Two Methods of Teaching Unit Two in the High School Social Studies 20 Course (1952) M.A. 1954
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- PEDDE, M.L. Children's Concepts of Base Area Symbols M.Ed. 1966
- POWELL, J.R. An Experiment to Determine the Value of Assigned Homework in Grade IX Social Studies M.Ed. 1959
- RAY, D.W. An Experimental Comparison of the Relative Effectiveness of Two Methods of Teaching the Social Studies in Grade Eleven (1960) M.Ed. 1963
- SENYCH, M. A Bibliographic Survey of Professional Literature on Three Selected Methods of Teaching Social Studies M.Ed. 1965
- WATKIN, J.F. Achievement in Grade IX Social Studies M.Ed. 1941

12. (Agricultural Education - Industrial Education)
 - Patterns of high school day programs
 - Evening school provisions
 - Part-time student provisions
 - Extent of applications of the evaluative criteria of the National Committee on Standards for Vocational Education in Agriculture (in the U.S.A.)
 - The Role of guidance and placement

13. (Business Education)
 - Status of distributive education programs
 - Organizational patterns of basic business education
 - Extent of provision in elementary schools for requisition of typing skill

BAKKEN, M.R. Money Management Understandings of Tenth Grade Students. M.Ed. 1966

BEERE, R.H. Some Aspects of Business Education in Canada with Particular Reference to Alberta M.Ed. 1962

BENEDICT, M.I. Criteria for Predicting Shorthand Success M.Ed. 1965

CURRIE, A.B. A Diagnostic Study of the Errors and Difficulties of Bookkeeping I Students in Learning the Theory of Debits and Credits and Some of its Applications B.Ed. 1934

DAWSON, L.S. A Follow-up Study of High School Shorthand Students M.Ed. 1966

GARBUTT, G.A. Analysis of Typed Three-Letter Combinations as Separate Words and as Part of Longer Words M.Ed. 1965

HENDERSON, A.E. A Diagnostic Study of Characteristic Errors in Elementary Bookkeeping B.Ed. 1934

HEWSON, A.C. The History of Commercial Education in Canada M.A. 1940

- POGUE, S.E. A Comparative Study of the Predictive Efficiency of Two Tests of Clerical Aptitude M.Ed. 1952
- UNIAT, P. Analysis of Speed and Accuracy on Timed Writings M.Ed. 1966
14. (Foreign Languages)
Trends
Aims and attainment
The "Army Method" and application to high school courses
Present placement and scope of foreign language programs
- BROSSEAU, J.F. Factors Influencing Second Language Learning M.Ed. 1965
- GIBAULT, J.L. The Effect of Instruction in French Upon the Mastery of the English Language in English-French Schools of the St. Paul Inspectorate M.A. 1939
- LAMBERT, R.A. An Experimental Comparison of Two Methods of Teaching French to Non-French Students at the Grade Ten Level M.Ed. 1959
- LAMOUREUX, P.A. The Application of Linguistic Principles to the Teaching of a First Year Course in High School French M.Ed. 1964
- LEBLANC, R. An Evaluation of the Phonic Method of Teaching the French 1 Course Outlined in the Alberta Handbook for Secondary Schools M.A. 1936
- MONOD, P.A.R. A Study of the First French Audio-Comprehension Departmental Examination in Alberta M.Ed. 1966
- SISTER DOMINIQUE DE MARIE An investigation of the Teaching of French to English-Speaking Pupils of Grades 1 to 8 of Alberta and Saskatchewan Schools M.Ed. 1962
- SISTER SAINTE-THERESIA An Experimental Study of Achievement in French Language by Non-French Pupils of Grade 4 and Grade 7 in Selected Alberta Schools M.Ed. 1963
- SISTER SIMON-HERMANN A Report on an Applied Linguistics Method Used to Improve the Spoken French of French-Speaking Students at the Grade Seven Level M.Ed. 1962
- SISTER SAINT-SYLVA An Investigation of the Teaching of French in the Bilingual Schools of Alberta and Saskatchewan M.Ed. 1960

WALKER, B.E. A Study of the Reading, Writing, Oral, and
Aural Skills of French Students in Alberta
M.A. 1941

WELDON, R.C. A Comparison of French-Speaking and Non-
French-Speaking Students in High School French
M.Ed. 1947

15. (Home Economics Education)
 - Status of home economic courses for boys
 - Relationship to consumer education
 - Relationship to family-life education
 - Current methods of teaching
 - Status of physical facilities
 - Relationship to adult education

RITCHIE, E.M. Some Historical Aspects in the Growth of
Home Economics Education in the Province of Alberta
(2 Vols.)
M.Ed. 1954

STEWART, A.M. Current Practices in Home Economics Education
Particularly with Reference to Alberta
M.Ed. 1949

16. (Industrial Arts)

ALLEN, K.E. A Review of Education in New Brunswick From
Earliest Times to the Present Day with Special
Attention to the Development of Vocational Education
M.Ed. 1952

CAMPBELL, T.R. Grade Nine Marks as Predictor Criteria for
Success in Selected Vocational Subjects
M.Ed. 1966

GALLAGHER, J.E. A Descriptive Analysis of Industrial Arts
in Alberta
M.Ed. 1963

LOWE, P.B. Technical and Vocational Training in Alberta--
A Descriptive Study of its Development
M.Ed. 1963

SMILANICH, R. An Inquiry into the Use of Multiple
Discriminant Analysis in Vocational Guidance
M.Ed. 1966

B. Curriculum - Other Aspects

1. (Adult Education)
 - Purposes and objects
 - Extent of efforts in Agriculture, art,
consumer areas, general, international
vocational education, health education
 - Responsibility and control
 - Content and Method

EMARD, C.H. A Portrait of Adult Education in a Central
Alberta Town
M.Ed. 1958

FEIR, D.L. A Survey of Adult Education in Canada
M.A. 1940

2. (Articulation of Educational Units)
 - High school-junior high school-
elementary school articulation
 - Broad field patterns of curriculum
development
 - Core program approaches
 - Fused programs
 - Graduation requirements
 - Utilization of community resources
in curriculum planning

GREEN, D.P. An Evaluation of Methods Used for Programme
Assignment in Edmonton's Continuous Progress Plan
M.Ed. 1963

McDOUGALL, W.D. An Evaluation of Pupil Progress in the
Skill Subjects in Enterprize and Conventional Schools
M.A. 1939

NYBERG, V.R. A Study to Determine the Effect of Transiency
on Grade Nine Departmental Examination Marks
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OGILVIE, W.L. A Longitudinal Study of the Effects on
Achievement of Promotion and Non-Promotion at the
Grade III Level M.Ed. 1961

REID, J.E. An Analysis of the Zone Testing Program in
Central Alberta M.Ed. 1964

3. (Child Development)

BEATON, M.A. The Effects of Acceleration on the Academic
Progress and on the Personal and Social Development of
Calgary and Edmonton Grade X Students M.Ed. 1956

BESSAI, F. Concept Attainment, Conditioning and Personality
Ph.D. 1964

CARLSON, J.E. The MAC as a Culture-Reduced Measure of
Intellectual Potential M.Ed. 1966

CHABASSOL, D.J. Correlates of Academic Underschievement
in Male Adolescents Ph.D. 1959

CROPLEY, A.J. Socio-Economic Status and the Development
of Intelligence M.Ed. 1963

D'AOUST, B.R. Concept Attainment as a Function of Stress,
Personality and Sex M.Ed. 1964

ELLEY, W.B. A Comparative Analysis of the Socio-Economic
Bias in Selected Intelligence Tests Ph.D. 1961

FLETCHER, A.R. A Study to Compare Grade VII Achievement
in the British Columbia Peace River Area with Selected
Factors M.Ed. 1966

FRIESEN, J.D. Relationship of G.S.R., Heart-Rate and
Personality Traits to Information Intake Ph.D. 1965

FRITZE, O.F. An Examination of the Relationship of Oral
and Written Reasoning Ability in Elementary School
Children Ph.D. 1959

GAVINCHUK, K. Academic Careers of Students Related to
Ability, Choice of Program, and Size of High School
M.Ed. 1966

HAY, C.M. A Method for Evaluating or Measuring the
Attitudes of (a) Responsibility and (b) Cooperation
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- HRABI, J.S.T. A Comparative Study of Male Discipline and Male Non-Discipline Cases in a Selected Composite High School M.Ed. 1958
- KINLEY, D.A. Sex-Role Learning of Grade One Students M.Ed. 1966
- LEFRANCOIS, G.R. The Acquisition of Concepts of Conservation Ph.D. 1966
- LENT, A.A. A Survey of the Problems of Adolescent High School Girls Fourteen to Eighteen Years of Age M.Ed. 1957
- McBRIDE, B.E.J. The Parental Identification of Adolescents Ph.D. 1961
- McGREGOR, J.R. A Study of the Self-Concepts and Ideal-Concepts of a Group of Adolescent Students M.Ed. 1955
- MAGUIRE, T.O. Component Curve Analysis of Concept Attainment M.Ed. 1964
- MISHRA, P. Factors Related to Concrete-Abstract Conceptualizing Ph.D. 1964
- MUNRO, B.C. The Structure and Motivation of an Adolescent Peer Group M.Ed. 1957
- NIELSON, J.K. Case Studies of Socially Isolated Males in Senior High School M.Ed. 1962
- OLSON, D.R. The Role of Verbal Rules in the Cognitive Processes of Children M.Ed. 1963
- ORME, M.E.J. Dogmatism in Parent-Child Relationships M.Ed. 1963
- ORTON, D.K. The Verbal Understanding of Proverbs By Sixth Grade Pupils M.Ed. 1966
- PETTIFOR, R.E. Group Differences in Perceptual Efficiency Ph.D. 1965
- PREVEY, E.E. A Study of the Mental Growth of the Pre-School Child M.A. 1934
- QUINN, J.W. An Investigation of the Validity and Dimensionality of Anxiety Scales M.Ed. 1964
- RATTAN, M.S. Predictive Validity and Stability of Measures of Intellectual Potential for Two Samples of Indian-Metis and Eskimo Children M.Ed. 1966

- SMELTZER, F.M. Flexibility Learning in the Classroom
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- SOUCH, S.G. Anxiety, Aggression, and Knowledge of Results
in Programmed Instruction M.Ed. 1966
- STRUTZ, P.G. A Study of Choice Behavior of Three Age
Groups Under Three Different Treatments of a Probability
Learning Task. Ph.D. 1966
- TASCHUK, W.A. An Analysis of the Self-Concept of Grade
Nine Students M.Ed. 1957
- TRAUB, R.E. Social Desirability in the Rural High School
M.Ed. 1961
- WARD, C.M. A Survey and Evaluation of Graduation Functions
Held by Selected Alberta High Schools M.Ed. 1962
- WELDON, R.C. An Experimental Development of Instruments
for the Measurement of Attitudes M.Ed. 1941
- WINE, J.J. Relationships between Scanning, Field Articulation
and Second Order Personality Factors Ph.D. 1965
- ZINGLE, H.W. Experimental Tests of Two Hypotheses Concerning
the Determinants of Function Fluctuation M.Ed. 1960

4. (Adolescent Development - Youth Culture)

- KITCHEN, H.W. Relationships Between the Value-Orientations
of Grade Nine Pupils in Newfoundland and the Characteristics
of Their Primary and Secondary Groups Ph.D. 1966

5. (Extra-Curricular Activities)

- Prevalence and patterns of extra-curricular activities
- Extent of participation
- Relation to curriculum
- Evaluation
- Extent of club programs in elementary schools
- Student government practices in elementary schools

The use and maintenance of school patrols--
selection, rewarding, station-use patterns

- BOYKO, S. Current Practices in Extracurricular Activities
in Alberta Centralized Schools M.Ed. 1959
- BRITTON, E.C. A Study of the Organized Community Life of
Junior High School Students M.A. 1946
- HUTTON, E. Extra-Curricular Activities in St. Joseph's Boys
High School M.Ed. 1960
- KRATZMAN, A. A Descriptive Survey of the Extracurricular
Programs of the Composite High Schools in Alberta
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- MacLEOD, A.R. Factors Related to Election to a Students'
Council Executive M.Ed. 1966
- MARLES, J.D. Extracurricular Activities in Edmonton
Junior High Schools M.Ed. 1963
- SCOTT, G.S. A Descriptive Survey of the Administration of
Extracurricular Activity Programs in Montreal Protestant
High Schools M.Ed. 1965
- SHERRITT, N.A. An Evaluation of the Contribution of Extra-
Curricular Activities to the Accomplishment of
Educational Objectives M.Ed. 1964
- WATKIN, J.F. Extra-Curricular Activities in Alberta High
Schools M.A. 1938

6. (The Family and Education)
- Teacher and understanding of social and
personal relations
 - Variations in family life by ethnic and
exceptional groups and social status
and relationship to schools
 - Influence of cultural settings
 - Relationships between home-reading
environment and achievement in
reading

NJAA, L.J. An Investigation of the Extent to Which Welfare Effects the Achievement Motivation, School, Achievement, Value-Orientations, and Level of Aspiration of Children in the Edmonton Separate School System M.Ed. 1966

NORTH, J. The Relationship of Broken Homes to the Performance of School Children M.Ed. 1965

SARUK, A. Academic Performance of Students of Ukrainian Descent and the Cultural Orientation of their Parents M.Ed. 1966

7. (General Education)

Patterns in curriculum design and general education as a common basis for normal human living in a democratic society versus individual living

Degree of separation and unification of general and vocational education

Relation to guidance and student activities

COONEY, D.E. Methods of Establishing the Reliability and Validity of Tests M.Ed. 1952

DEUTSCHER, E.L. An Analysis of Time Allocation and Scheduling Practices in the Junior High Schools of Alberta M.Ed. 1965

McMANUS, T.M. A Survey of Pupil Progress in Edmonton City Schools M.Ed. 1950

MEREDITH, J.R. A Comparison of Courses of Studies in Secondary Schools of Canada M.Ed. 1963

PYRCZ, C. A Diagnosis of the Study Habits of our High School Students with the Difficulties and Study Problems Encountered by the Students B.Ed. 1942

SHAUL, R.E. A Survey of the Homework Problem in Alberta M.A. 1939

SKWAROK, J. The Ukrainian Settlers and Their Schools M.Ed. 1958

SOUCH, E.B. A Survey of Opinions Regarding Certain Suggested Modifications of Education in Canada M.Ed. 1948

- THOMAS, V. Characteristics of Elementary Report Cards
M.Ed. 1959
- WANGERIN, W.M. A Descriptive Study of the Minimum Requirements for Graduation from Secondary Education in the Provinces of Canada in 1958
Ph.D. 1959
- YOUNG, J.A. An Objective Comparison of Achievement in the Basic Subjects for Matched Groups of Children in Manchester, England and Edmonton, Alberta
M.Ed. 1963

8. (Gifted Children)

Definition and identification
Adaptation of the school to gifted children--school practices to provide for enrichment or acceleration

- CHALMERS, J.M. An Analysis of Results Obtained on the Wechsler Intelligence Scale for Children by Mentally Superior Subjects
M.Ed. 1953
- HALL, L.G. A Bibliographical Survey of the Education of Gifted Children
M.Ed. 1957
- HOUSEGO, I.E. Alberta Composite High Schools and Gifted Youth
M.Ed. 1958
- STEWART, R.C. A Description and Appraisal of Enrichment Provided for and Facilitated in Special Class Programs for Academically Talented Pupils in the Saskatoon Public Elementary School System
M.Ed. 1963

9. (Individual Differences)

Organizational adaptations to individual differences
Plans and techniques in use for individualizing instruction within classes
Guidance services (see Special Services-Guidance)

Adjustment teachers and opportunity
classes

Use patterns of text materials, reference
materials, pamphlets, trade books,
visual aids, construction material,
art equipment, field trips, workbooks

LAMBERT, R.A. Cognition and Achievement: An Examination
of Individual Differences Among Grade Ten Students
Ph.D. 1962

MUNRO, B.C. Meaning and Learning Ph.D. 1959

SLY, H.F. An Analysis of Sex Differences in an Alberta
School Population M.Ed. 1960

10. (Integration)

The Status of Alberta schools as nurturant
agencies
as community centers
as agencies for cross-cultural contacts
as places of humanitarian activities
as centers of cooperative effort
as examples of democracy in action
degree of acculturation of children

HAMILTON, W.L. The Perception of Problems Associated with
Inter-Group Relations in Integrated Schools
M.Ed. 1966

11. (Norms and Grouping)

ARBEAU, A.M. A Survey of Pupil Grouping Practices in
Grades I to XII in Alberta Schools M.Ed. 1963

EVANS, W.H. Certain Grouping Combinations Used in Split
Grade Classes in the Elementary School M.Ed. 1962

- KIEFER, R.B. The Thematic Apperception Test Pictures; A
Study of Common Stories as Told by Normal, Adult Females
M.Ed. 1950
- LUST, A. Academic Achievement of Slow Learners in the
Edmonton Continuous Progress Plan M.Ed. 1966
- MELNYCHUK, R.S. Academic Achievement of Pupils in the
Edmonton Continuous Progress Plan M.Ed. 1964
- QUINLAN, P.J. The Evaluation of Transition Classes for Low
Achievers M.Ed. 1964
- ROSS, D.H. A Comparative Study of Interclass Grouping and
Non-Grouping in Grade Seven Achievement M.Ed. 1965
- ROUTLEDGE, R.H. A Study to Establish Norms, for Edmonton
Public Secondary School Boys, of the Youth Fitness Tests
of the American Association for Health, Physical
Education, and Recreation M.Ed. 1961
- SAWCHUK, T.J. A Study of the Effects of Homogeneous
Grouping on Teachers' Grades Given to Matriculation
Students in the Grade X Core Subjects M.Ed. 1960
- TRUCKEY, L.A. Comparison of Achievement of Grade Nine
Students in Selected Single Grade and Multi-Grade
Classes in Alberta M.Ed. 1964

12. (Parent-Teacher-Community Relationship)
Identification and description of problems
which should receive the cooperative
attention of teachers and parents
Effect of different methods of cooperation

- BRIDE, K.W. Public Attitudes Toward Schools in Lethbridge
Division No. 7 M.Ed. 1962
- BRIMACOMBE, A.K. The Construction of a Scale to Measure
Adult Attitude Toward the Alberta Educational System
M.Ed. 1957
- COFFIN, E.R. An Investigation of the Amount of Knowledge
Concerning the Schools and the School System Possessed
by the Public M.Ed. 1959

- HARPER, W. An Investigation of Parental Opinions Concerning the Calgary School Board Accelerated Programme M.Ed. 1963
- INGRAM, E.J. Public Attitudes Toward Education as a Basis for a Public Relations Program M.Ed. 1961
- KOWALSKI, A.E. An Analysis of Teachers' Perceptions of and Participation in Community Decision-Making M.Ed. 1965
- McKENDRY, T. A Survey and Analysis of the Activities of Edmonton's Home and School Associations M.Ed. 1964
- MARTIN, J.M. A Study of Parent Teacher Conferences in the County of Ponoka M.Ed. 1964
- RUSSELL, R.T. Parental Opinion on Home-School Communications M.Ed. 1961
- SISTER J. BERCHMANS An Investigation into the Foyer-Ecole Movement in Saskatchewan M.Ed. 1963
- WORTH, W.H. An Analysis of the Editorial Treatment of Education in the Alberta Press M.Ed. 1952
- WRIGHT, J.R. A Survey and Analysis of Local Home and School Activities in the Edmonton Area M.Ed. 1963

13. (Primary Education)
 Status of kindergarten
 Relationship of curricula to maturation
 Status of provisions for acquiring the disciplines and ideas fundamental to life in a democratic society--provisions for continuity of this development--scope and sequence
 Research in studies of provisions in Alberta Curricula for readiness for learning reading, arithmetic and language expression

- BRACE, A.T. The Pre-School Childs' Concept of Number M.Ed. 1963

- GILLESPIE, E.M. An Evaluation of the Four Year Program in
Division I as Followed by the Calgary Public Schools
M.Ed. 1959
- OLSON, M.I. The Development of Play Schools and Kinder-
gartens and an Analysis of a Sampling of These
Institutions in Alberta M.Ed. 1955
- POWELL, F.W. A Critical Evaluation of the Detroit Beginning
First Grade Intelligence Test M.Ed. 1956
- RITCHIE, R.C. A Survey of Selected Nongraded Elementary
School Programs in Canada and the United States
M.Ed. 1960
- STOREY, A.G. An Exploration and Evaluation of the S.R.A.
Primary Mental Abilities Test, as an Instrument for
Measuring the Intelligence of First Grade Beginners
M.Ed. 1952
- WHITBREAD, S.B. A Proposal for School Guidance Utilization
of Children's Drawings M.Ed. 1963

14. (Prognosis and Prediction)
Patterns of measurement programs in Alberta
Schools
Status of vocational prognosis
Follow-up provisions

- BEVINGTON, W.G. Effect of Age at Time of Entrance into
Grade I on Subsequent Achievement M.Ed. 1957
- BLACK, D.B. The Value of Grade IX Departmental Examinations
ULMER, F.H. in Predicting Success at the Grade XII Level
M.Ed. 1949
- BODNARUK, W. A Comparative Study of Examination Results
Grades IX and XII in One Town School and in Three
Rural Centralized Schools in the County of Ponoka
M.Ed. 1962
- CONKLIN, R. A Psychometric Instrument for the Early
Identification of Underachievers M.Ed. 1965
- CURRIE, A.B. A Study of Some Factors Relating to Success
and Failure in an Examination at a Commercial High
School M.A. 1932

- DEY, J.C. Theory and Practice Governing the Time of School Entrance M.Ed. 1960
- EVANS, K.L. The Academic History of the 1945 Grade IX Class in Their Subsequent High School Careers M.Ed. 1953
- EVENSON, A.B. The Selective Character of Secondary Education in Alberta B.Ed. 1942
- GAVINCHUK, M.N. A Comparative Study of the Relation of Academic Achievement and Certain Intelligence Tests at the Junior High School Level M.Ed. 1954
- GREENFIELD, T.B. Systems Analysis in Education - A Factor Analysis and Analysis of Variance of Pupil Achievement Ph.D. 1963
- GUSHATY, M. An Analysis of the Causes of High School Drop-outs in Southern Alberta From 1947-1951 M.Ed. 1952
- HAMBLY, J.R.S. A Survey of Fifty Two-Room High Schools in the Province of Alberta Over a Four Year Period M.Ed. 1944
- HEYWOOD, A.J. A Study of the High School Population in Drumheller, Garneau, Strathcona and Victoria High Schools Entering Grade IX in Period 1922-1926 M.A. 1935
- HOHOL, A.E. A Review of the Evidence on the Problem of Why Youth Leave School M.Ed. 1954
- KNOWLES, D.W. The Influence of Faculty, High School Size, and Sex in the Prediction of Freshman Success Using Departmental and Principals' Rating Grade XII Scores M.Ed. 1965
- KOSTASH, W.E. Relationship Between Scores Obtained by Bennett and Bernreuter Systems of Scoring Bernreuter Inventory M.Ed. 1949
- McDONNELL, M.W. The Prediction of Academic Achievement of Superior Grade Three Pupils M.Ed. 1959
- MacINNIS, M.J. The Guidance Value of Grade IX Departmental Examinations and Other Selected Factors in Relation to Matriculation of Composite High School Students M.Ed. 1958
- MacNEIL, V.A. Relationship Between Scores Obtained by Bennett and Bernreuter Systems of Scoring Bernreuter Inventory M.Ed. 1950

- MOYS, A.W. A Study of the Comparative Value of Predictive Tests Administered in the University High School, 1946 to 1948 M.Ed. 1950
- NEARING, J.J. A Study of the Academic Careers of Selected Non-Academically-Gifted Students in Alberta Composite High Schools M.Ed. 1959
- NEWLAND, E.F. A Study of the Factors Relating to High School Success or Failure M.A. 1933
- OLSON, D.R. The Influence of Foreign Language Background on Performance on Selected Intelligence Tests M.Ed. 1962
- RANCIER, G.J. Ten Case Studies of High School Drop-Outs in the Acadia School Division M.Ed. 1962
- REID, J.E. An Analysis of the Zone Testing Program in Central Alberta M.Ed. 1965
- TAYLOR, D.M. A Study of the Prognostic Value of a Group Intelligence Test M.A. 1933
- WAGNER, W.P. An Evaluation of Selected Tests as Predictors of Success in Industrial Arts M.Ed. 1951
- WEST, L.W. Assessing Intellectual Ability With a Minimum of Cultural Bias for Two Samples of Metis and Indian Children M.Ed. 1962

15. (Religious Education)

Status of provisions for time and scope of efforts

- CHORNEY, M. An Investigation into the Desirability of Religious Education in Public Schools with Particular Reference to the Public Schools of Alberta M.Ed. 1949

16. (Safety Education)
 Use of existing "safety" materials
 Status of Driver-training programs
 Instructional methods

17. (Teacher-Student-Parent Attitude)

- BEAN, R.E. An Exploratory Comparison of Indian and Non-Indian Secondary School Students' Attitudes
 M.Ed. 1966
- CARRAN, R.C. A Study of Student and Adult Attitudes Towards The Technical Electives Programs in Edmonton Composite High Schools
 M.Ed. 1961
- CÔTÉ, A.D.J. Perceived Belief Dissonance as a Source of Disaffection between French-Speaking and English-Speaking Canadians
 M.Ed. 1965
- HERTZOG, R.L. Individual Differences in Semantic Differential Ratings of the Concept 'Faculty of Education'
 M.Ed. 1965
- HUDSON, D.E. Student, Parent, and Teacher Attitudes Toward the Pre-Employment Classes in the Edmonton Public School System, 1964-65
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- JOHNSON, C.B. An Educational and Sociological Study of the Grande Prairie Inspectorate
 M.A. 1943
- MENEAR, D.W. Parent Opinion and Pupil Achievement
 M.Ed. 1960

II. Special Areas

A. Guidance - Counselling - Pupil Personnel

Provisions for recognition of deviate children
 Status of revision of marking and promotion standards
 Status of mental hygiene in curriculum
 Status of use of sociometric and other group process techniques
 Cooperative curriculum experience
 Status of homework demands
 Definition and identification of gifted children
 Adaptations of schools to gifted children
 Problem children and delinquents
 provisions for clinical referral
 administrative plans for case conference approach
 integration of school program with other community resources for social welfare--
 social workers, community health, industrial facilities, civic organizations
 group treatment procedures
 Organizational and administrative patterns
 Retention in school patterns
 Attendance Patterns
 Nature of visiting teacher activities
 Status of cumulative record-keeping method of transferring data to other schools
 Group-guidance programs--evaluation of home-room activities
 Organization of counselling services
 Present state evaluation procedures
 Psychological services
 Potential demand for school psychologists in Alberta
 Development of certification requirements for school psychologists and establishment of graduate training requirements
 Up-grading of standards for guidance personnel in elementary and secondary schools
 Analysis of differential standards of achievement for secondary-school graduates: (i.e. Do graduates from different Alberta schools have equal likelihood of success in college?)
 Analysis of human resources loss through out-of-province migration. What differential selective factors determine which students, secondary and college, leave Alberta upon graduation?
 School health services--patterns of organization
 Health examinations
 Physician and nurse services
 Visiting teacher service

- AASERUD, J.L. A Survey of the Functions of the Counsellor as Seen by the Principals and Counsellors in the Edmonton Public Junior High Schools 1961-62 M.Ed. 1963
- BARGEN, P.F. The Legal Status of the Canadian Public School Pupil Ph.D. 1959
- BLAKE, V. An Application of Social-Psychological Theory in the Analysis of the Choice of a Scientific Career Ph.D. 1965
- BRIGGS, J.W. A Comparative Study of Client-Centered Versus Directive Group Counselling M.Ed. 1966
- BROWN, A.F. The Self in Interpersonal Theory: A Study of the Relationship Between Dominance-Submissiveness Attitudes Referring to Self and to Significant Others M.Ed. 1957
- DEAKIN, D.E. Vocational Guidance for High School Students in Alberta M.A. 1939
- FERGUSON, L.W. The Development of Sensitivity to Non-verbal Communication as it Relates to Empathy in the Counseling Relationship M.Ed. 1966
- FERGUSON, Y.J.E. An Experimental Comparison of Two Methods in the Treatment of Stuttering M.Ed. 1965
- FRICKE, B.G. Are the Grade XI Students in Edmonton Making Vocational Plans in Line with Their Mental Ability? M.Ed. 1950
- JONES, G.B. An Experimental Application of the Principle of Incongruity Tolerance to the Counselling Setting M.Ed. 1962
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- KING, H.L. A Study of Principles Involved in Dealing with Juvenile Delinquents in the City of Edmonton B.Ed. 1934
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- PETERS, H.D. An Experimental Application of the Concepts of Image and Plans to the Counselling Setting Ph.D. 1961
- POLLACK, S.E.L. Inventoried Interests in the Professions As Estimated by Boys of University Entrance Level M.Ed. 1950
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- ROLLANS, W.H. Group Counseling of Underachieving High School Students M.Ed. 1966
- TYLER, T.F. A Study of Certain Selected Alberta Occupations B.Ed. 1938
- ZINGLE, H.W. A Rational Therapy Approach to Counseling Underachievers Ph.D. 1965

B. Library

Working relationships of public and school
libraries
Administrative procedures
Methods of selection of materials
Status of state training facilities for
librarians
Status of in-service training in the library
service field
Status of certification
Status of physical facilities for elementary
and secondary school libraries

DUKE, W.R. The Parkland Regional Library M.Ed. 1966

McKENZIE, E. The Library Facilities and Reading Interests
of Pupils in the Intermediate Grades in the Public
Schools in a Small Urban Center M.Ed. 1960

C. Health Service

(See health education under curriculum)
Status of school health councils or communities
and their function
Status of programs for
giving immediate care
notifying parents
getting pupils home
guiding parents to source of treatment
where necessary
Status of programs involving use of teacher
observations, screening, tests, reports
from the pupils and parent, psychological,
medical and dental examination
Extent to which schools' current policies
for the prevention and control of communicable
diseases are based on the most recent and
authoritative public health practices
Status of cumulative health records
Degree of utilization of community resources

BAILEY, W.D. An Evaluation of a course in Constructive
PATMORE, L.E. Medicine Offered at the Summer Session 1947,
by the Edmonton Rural Health Unit M.Ed. 1948

GISH, H.B. A Survey of School Health Services in Alberta
1950-51 M.Ed. 1952

D. Lunch Programs

Status of Alberta schools lunch programs as
related to existing criteria

RUDIAK, M.W. Noon-Hour Supervision in Alberta Schools in
Which Part of the Pupils are Conveyed M.Ed. 1957

E. Transportation and Lodging

Status of extent of private and public transpor-
tation of pupils

Relationship of transportation routes to logical
school centers

Adequacy of types and costs of transportation
insurance

Status of the selection and training of school
bus drivers

Norms of bus age, type, costs, etc. and degree
of adherences to school bus standards

Relative merits and costs of district ownership
of buses and private ownership

DANDELL, D.C. Dormitories in the Large Divisions
B.Ed. 1942

HOLMAN, M. A Study of Attendance and Achievement in
Arithmetic, Reading and Language of Vanned and Unvanned
Pupils in Certain Centralized Schools of Alberta
M.Ed. 1959

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Achievement M.Ed. 1957

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Ownership of School Buses in Alberta M.Ed. 1952

SKUBA, M. Population Density and Pupil Transportation Costs
in Alberta Ph.D. 1965

F. Audio-Visual Materials

Frequency and distribution of equipment for instruction
 Degree of integration of field trips in curriculum
 Use of still pictures, film strips, and lantern slides
 Use of museum materials
 Status of teacher preparation in use of audio-visual material
 Provisions for blackboard and bulletin board space

BIRDSALL, E.H. A Questionnaire Investigation of the Reactions of School Children to Moving Picture Shows
 M.A. 1933

KRAVETZ, G. An Evaluation of the Effectiveness of the Use of Films in Divisional and County Schools in Alberta
 M.Ed. 1961

G. Recreation

Status of coordinating efforts between school and community
 Recreation for handicapped children
 Typical patterns of recreational programs
 cities over 25,000
 " from 10,000 to 25,000
 " " 2,500 to 10,000
 " under 2,500
 rural communities
 northern communities

ECKERT, H.M. The Development of Organized Recreation and Physical Education in Alberta
 M.Ed. 1953

H. Special Education for the Handicapped

Provisions for:

visually handicapped
 auditorily handicapped
 orthopedically handicapped
 other - cerebral palsy, infantile paralysis,
 speech defects, crippled conditions,
 mentally retarded

Implementation of existing legislation

Status of qualified teaching personnel

Provisions for early identifications and
 adjustment

Guidance services

Non-intellectual characteristics of handicapped

HEPBURN, D.W. An Investigation of Teachers' Judgment of
 Educable Mentally Handicapped and Other Weak Students
 in Elementary Classes M.Ed. 1964

HOLT, P.W.R. Administrative Practices Concerning the
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 Schools M.Ed. 1962

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KIBBLEWHITE, E.J. Mental Hygiene Clinics in Alberta, with
 a Study of Selected Clinic Cases of School Age
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PALATE, E.L. The Measurement of Sentence Structure for
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 to Educable Mentally Retarded Boys M.Ed. 1963

I. Follow-up Studies

ACKROYD, A.O. A Study of the Post-School Occupations of
 ROBERTS, W.G. Students Who Graduated with University
 Matriculation from Alberta High Schools in
 1949 M.Ed. 1952

- ALLISON, C.J. Characteristics of Students who Failed Grade Seven in Edmonton Junior High Schools 1951-1952
M.Ed. 1959
- MALLET, I.B. A Study of Factors Associated with Failure in Selected Subject Areas of Grades 10 and 11.
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- SISTER MARY ANNATA BROCKMAN Relationship Between Transiency and Test Achievement of Grade Six Students M.Ed. 1965

J. Pupil Attendance

- DROLET, J.Y. A Study of the Impact of Demographic and Socio-Economic Factors on School Attendance Rates in the Province of Quebec from 1901-1951 Ph.D. 1961

K. Statistical and Computer Design

- HEMPHILL, H.D. A Survey and Analysis of the Adoption of Automatic Data Processing in Canadian School Districts
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L. Philosophy of Education

- BLAKE, W.N. John Dewey's Concept of Work and Educational Implications M.Ed. 1965
- COLL, E.B. Jacques Maritain: Man and Educator
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- FIGUR, B. An Historical Survey of Certain Concepts Basic
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the Alberta Scene M.Ed. 1950
- HARKER, L. A Survey of Education In Ghana, 1751-1962
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- HUTCHINSON, B. The Educational Theory and Contributions
of Sir Richard Winn Livingstone M.Ed. 1963
- HURT, E.F. Sociological Background of Modern Elementary
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- JENKINSON, J.A. The Educational Ideas of St. Augustine
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- MacIVER, D.A. Bertrand Russell on Moral Education
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- MARZOLF, A.D. Alexander Cameron Rutherford and His
Influence on Alberta's Educational Program M.Ed. 1961
- MILLER, P.J. The Educational Ideas and Practice of Hannah
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M.Ed. 1965
- MOORE, D.P. Educational Theory as Reflected in the
Proposals of the French Revolutionary Governments,
1789-1795 M.Ed. 1965
- MORRISON, P.N.R. Some Observations on the Contributions
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- O'DRISCOLL, D.L. A Comparative Study of Secondary
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- PANNU, R.S. A Sociological Survey of Teachers from India
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- RUSAK, S.T. Relations in Education Between Bishop Legal
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- SAMIS, F.W. Moral Development as an Educational Aim with
Particular Reference to the Views of Reinhold Niebuhr
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- SCHALM, B. Moral Assumptions in the Psychology of Carl
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- STRATTE, O.A. Humanism and Art: Humanism as a Modern Philosophical Trend and Its Implications in the Teaching of Art M.Ed. 1965
- THOMSON, K.H. The Educational Philosophy of Tolstoy M.A. 1938
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- BLACK, J.M. A Critical Examination of the Experimentalist's Concept of Integration M.Ed. 1952

III. Personnel

A. Classroom Teachers

1. Preparation patterns and where they are placed

- BROWNE, M.P. A Longitudinal Investigation of the Effects of Training and Experience on Beginning Teachers' Perceptions of Critical Teaching Behavior M.Ed. 1965
- CAMERON, D.R. Teacher Certification in Canada M.Ed. 1960
- PETTIFOR, R.E. Public Opinion Concerning the Selection and Training of Teachers M.Ed. 1948
- RANDALL, R.E. The Training of Teachers for Social Studies Instruction M.Ed. 1963
- SMITH, D. The Dynamic Aspects of Teacher Training M.Ed. 1949

2. Teacher movement patterns

- HOHN, E.G. A Study of the Causes of Teacher Transfer in
a School System M.Ed. 1964
- LUNDRIGAN, J.H. Factors Related to Inter-School Mobility
Among Certificated Teachers in Newfoundland M.Ed. 1966
- MURRAY, T.H. An Investigation of the Reasons Why Teachers
Leave Teaching M.Ed. 1955

3. Studies in effective teaching

- BACON, J.A. Rated Teacher Effectiveness as Related to
Perception of Problems in Northern Schools M.Ed. 1966
- EDDY, W.P. A Study of Certain Characteristics of Teachers
in Relation to Grade Nine Social Studies Achievement
M.Ed. 1962
- GREENFIELD, T.B. Teacher Leader Behavior and its Relation
to Effectiveness as Measured by Pupil Growth
M.Ed. 1961
- FENSKE, M.R. An Analysis of the Work Week of a Sample of
Central Alberta High School Teachers M.Ed. 1961
- KLUFAS, H. An Analysis of the Relationship Between Four
Selected Characteristics of Teachers and the Results of
Their Students in the Final Examination in Physics 30
M.Ed. 1964
- LINDSTEDT, S.A. An Analysis of the Relationship Between
Certain Qualifications of Grade IX Mathematics Teachers
in Alberta Schools and the Results of Their Students
in the Final Examination for the Year 1957-1958
M.Ed. 1960
- McBEATH, A.G. Teacher Leader Behavior and its Relation
to Teacher Effectiveness M.Ed. 1959
- McBRIDE, B.E.J. A Factorial Study of Student Assessments
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- MOORE, T.J. An Identification and Analysis of the Criteria
Employed in Teacher Evaluation M.Ed. 1966
- MUIR, W. Dependency and Knowledge of Results in Pro-
grammed Instruction M.Ed. 1965
- NICHOLS, L. A Study of the Methods Used in Canadian Urban
School Systems to Evaluate the Efficiency of Elementary
Teachers Employed in These Systems M.Ed. 1958
- SHEANE, G.K. The Selection of Prospective Teachers
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- SISTER M.C. KUEFLER A Study of Orientation Procedures
for New Teachers in Selected School Systems
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- STRANDBERG, L.A. The Relation of Pupil Achievement In
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- TETLEY, D.F. The Relationship of Certain Teacher
Characteristics to Pupil Achievement in Reading
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- UNRAU, W.R. An Investigation of Four Methods of Pre-
senting Programmed Material M.Ed. 1962
- WASYLYK, E. The Relation Between Four Selected Teacher
Characteristics and Student Achievement in Grade
Twelve Mathematics M.Ed. 1961

4. Selection and Induction Policies and Practices

5. In-Service Training

Patterns of using supervisors

Patterns of departure--from philosophy
building--from immediate staff, school,
and curriculum problems

BROWN, A.F. The Differential Effect on Stress-Inducing
Supervision on Classroom Teaching Behavior Ph.D. 1961

FORMANEK, S.C. An Investigation of the Assistance Received
by Beginning Elementary School Teachers in the Calgary
Public School System M.Ed. 1965

McGILLIVRAY, W.R. A Survey of Supervisory Assistance as
Perceived By Beginning Teachers in Selected Urban High
Schools in Ontario M.Ed. 1966

6. Supply and Demand

FOWLER, W.T.M. Teacher Demand and Supply in Canada
M.Ed. 1948

7. Professional Organizations

BAKER, T.D. A Study of the Social and Economic Status of
Teachers as Related to Conditions of Teacher Shortage
Qualifications and Stability in Canada M.Ed. 1948

BROWN, C.K. The Development of Teacher Tenure Legislation
in Alberta M.Ed. 1963

DIXON, J.L. The Prestige and Professional Growth of
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FRANCOEUR, K. Factors of Satisfaction and Dissatisfaction
in the Teaching Profession M.Ed. 1963

HRYNYK, N.P. Correlates of Professional Role Orientation
in Teaching Ph.D. 1966

- LOEWEN, F. The Status of the Teaching Profession in
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- ODYNAK, S.N. The Alberta Teachers' Association as an
Interest Group Ph.D. 1963
- INGRAM, E.J. Member Involvement in the Alberta Teachers'
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- McDOWELL, C.S. The Dynamics of the Saskatchewan Teachers'
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8. Other

- BEZEAU, L.M. The Instrumental - Expressive Dichotomy
in School Staffs M.Ed. 1966
- DELEFF, A. The Role of the Cooperating Teacher
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- McCURDY, S.G. The Legal Status of the Canadian Teacher
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- McTAGGART, J.A. An-Analysis of the Role of Head Teacher
in British Columbia M.Ed. 1966
- OKONKWO, A.E.N. A Study of Teachers' Attitudes and
Their Relation to Work Satisfaction M.Ed. 1966
- RATSOY, E.W. A Comparative and Cross-Sectional Study of
Attitudes of Prospective Teachers Ph.D. 1965
- SWAN, J.F. An Historical Survey of the Board of Reference
in Alberta M.Ed. 1961

B. Administrative - District, Divisional and County Superintendents, Elementary and High School Principals

1. Training

- BLOCKSIDGE, J.H. Change of Leader Behavior Attributable to the Leadership Course for School Principals M.Ed. 1964
- CHOMIK, H. A Descriptive Survey of Certification of School Principals in Canada and the United States M.Ed. 1964
- WALLIN, H.A. Nominations as a Technique for Identifying Potential Principals M.Ed. 1962
- WORGER, F.E. An Investigation to Discover the Effectiveness of Teacherages as a Factor in the Retention of Administrative Staff in Centralized Schools M.Ed. 1958

2. Organizational Behavior, Role Studies, Leadership

- BOSETTI, R.A. Congruence of Expectations, Sensitivity to Perceptions, and Rated Administrative Effectiveness M.Ed. 1966
- BREWER, B.N. The Elementary Principalship in Interior British Columbia: A Study in Role Conflict M.Ed. 1966
- BROWN, H.C. The Role of the Principal in Centralized Schools in a Rural Area in Saskatchewan M.Ed. 1964
- CHEAL, J.E. Role Conflict in the Principalship of the Composite High School M.Ed. 1958
- ENNS, F. A Survey of the Present Status of the Vice-Principal in Divisional and Country Schools of Alberta M.Ed. 1959
- EWASIUK, D. The Relationship of Role Perceptions of Principals to Selected Characteristics of Schools and Principals M.Ed. 1966

- FAST, R.G. Leader Behavior of Principals as it Relates
to Teacher Satisfaction M.Ed. 1964
- FENSKE, M.R. Administrative Duties of Principals and
Vice-Principals in an Alberta School Division M.Ed. 1963
- HARRISON, R.E. An Analysis of the Weekly Work Load of
Nova Scotia High School Principals M.Ed. 1965
- HARVEY, R.F.E. School Organizational Climate and Teacher
Classroom Behavior Ph.D. 1965
- HEWKO, W.M. An Analysis of the Role of Junior High School
Co-ordinator M.Ed. 1965
- HOLDAWAY, E.A. An Analysis of Some Factors Affecting
Innovation in Elementary Schools M.Ed. 1965
- HOUSE, J.H. An Analysis of Interpersonal Influence
Relations Within a School Organization Ph.D. 1966
- KEELER, B.T. Dimensions of the Leader Behavior of
Principals, Staff Morale and Productivity Ph.D. 1961
- LEDGERWOOD, C.D. Some Personal and Professional Charac-
teristics of Alberta School Principals, 1958 M.Ed. 1963
- LUPINI, D. A Study of the Relation of Differential Values
to Social and Administrative Interactions Ph.D. 1965
- MacKAY, D.A. An Empirical Study of Bureaucratic Dimensions
and Their Relation to Other Characteristics Ph.D. 1964
- McLEOD, J.D. The Urban Assistant Principal of Elementary
and Elementary-Junior High Schools M.Ed. 1959
- McLOUGHLIN, R.I. A Study of the Role of Supervisor of
Elementary Instruction M.Ed. 1965
- McMULLEN, K.D. A Comparative Investigation of the Roles
of Rural and Urban Principals M.Ed. 1966
- MARION, G.B. A Study of Selected Factors Related to the
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- MIKLOS, E. Dimensions of Conflicting Expectations and the
Leader Behavior of Principals Ph.D. 1963
- MIKLOS, E. A Survey of Staff Meetings in Alberta Schools
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- MORIN, L.H. The Principal's Perception of his Role M.Ed. 1966
- MORRIS, D.V. Staff Characteristics and Principal Leadership M.Ed. 1963
- PITSULA, M. An Analysis of the Role of Supervisory Assistants in Large Administrative Units in Saskatchewan M.Ed. 1966
- PLAXTON, R.P. Personality of the Principal and School Organizational Climate M.Ed. 1965
- PYRA, J.F. A Study of Relationships Between School Climate Characteristics and Student Attitudes Toward the School M.Ed. 1965
- RAPPEL, L.E. The Relationship Between the Type of Successor to the Principalship and Organizational Change in Schools M.Ed. 1965
- ROBINSON, N. A Study of the Professional Role Orientations of the Teachers and Principals and Their Relationship to Bureaucratic Characteristics of School Organizations Ph.D. 1966
- SABEY, R.H. A Comparison of the Achievement of Grade IX Pupils in Various School Organizations M.Ed. 1966
- STRYDE, S.J. Relationships Between the Perceptions of the Organizational Climate of Schools Held by Principals and by Members of the Teaching Staffs M.Ed. 1966
- TOEWS, H. A Survey and Evaluation of Alberta Divisional and County Principals' Associations M.Ed. 1959
- UHLMAN, C.C. An Analysis of the Expectations of School Board Members for the Role of Supervising Principal in Nova Scotia M.Ed. 1966
- VON FANGE, E.A. Implications for School Administration of the Personality Structure of Educational Personnel Ph.D. 1961
- WALLS, R.B. An Evaluation of Supervision in the Calgary Public Elementary and Junior High Schools M.Ed. 1960
- WARREN, P.J. Leadership Expectations of the Principal in Newfoundland's Regional and Central High Schools as Perceived by Principals and Staffs M.Ed. 1959

- WETTER, W.J. The Role of the Elementary School Principal
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- WILSON, W.G. An Analysis of Changes in the Organizational
Climates of Schools
M.Ed. 1966
- ZIOLKOWSKI, E.H. A Study of Practices Employed by High
School Principals in the Supervision of Instruction
M.Ed. 1965

C. Custodians

D. Bus Drivers

E. Health Service Personnel

F. Luncheon Personnel

G. Librarians

IV. Facilities

A. Alberta Building Costs

Province-wide evaluation by accepted criteria of:

- Adequacy of sites
- Land purchasing procedures
- Landscaping procedures
- Materials in use
- Lighting patterns
- Heating and ventilation
- Provisions for electrical facilities
- Equipment in use
- Architectural selection
- Utilization of existing plans
- Criteria used in allocation of space for
classrooms, pupil stations, gyms, etc.

RHINE, R.L. Alberta Government Provisions for the Financing
and Construction of School Buildings M.Ed. 1965

B. Services Provided for in Alberta School Building

- Use of outside consultant services
- Legislative provisions
- Articulation with district reorganization needs
- Utilization of minimum standard criteria of
accrediting associations
- The role of state department published handbooks

FACEY, F.B. The Smaller School Plant in Relation to Modern
Education in Alberta M.A. 1943

JONASON, J.C. A Survey of School Grounds, School Plant and
Teacherage Conditions in Eighty Schools Situated in
Central and Northern Alberta M.A. 1940

C. Community Participation in Planning Building Programs

Roles of community councils in planning for future building needs

Non-school community needs to be considered - amateur theatre groups, group study, clubs, etc.

The role of Home and School Associations

The use of technically-qualified laymen in planning a school building program

ST. JAMES, A.M. An Investigation of Participation By Community Groups in the Decision-Making Process in Elected, Partly Elected, and Appointed School Boards
Ph.D. 1966

D. The Extent to Which Philosophy Has Preceded Curriculum and Curriculum Has Preceded Building

Building projects related to subject correlated core, broad fields, and experience curricula

Building projects related to immediate physical plan expansion needs

BARDOCK, E.F. A Study of Accreditation M.Ed. 1960

COOK, D. A History of Educational Institutions in Mormon Communities of Southern Alberta M.Ed. 1958

JAMES, S.E.L. An Historical Survey of Education in the Strathmore Area of Alberta 1900 - 1958 M.Ed. 1963

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SMITH, F.H. A General Survey of the Protestant Affiliated and Accredited Secondary Schools in Alberta
M.Ed. 1949

E. Extent of Cooperative Buying to Reduce Costs

F. Insurance Programs

HALL, H.J. Insurance Practices and Experience of
Division and County School Systems in the Province
of Alberta M.Ed. 1956

V. Organization, Administration and Finance

A. Plans of Organization -- 8-4, 6-6, 6-3-3

Retention patterns in each type
Provisions for varied abilities in each type

DUPUIS, J.R.P. A Study of the Changes in the French
Catholic System of Education in Quebec from September
1959 to June 1963 M.Ed. 1965

GILLES, J.W. School Divisions in Alberta, Their Organization,
Operation, and Contributions to Educational Progress
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System of School-Year Organization at the Lindsay Thurber
Composite High School, Red Deer, Alberta M.Ed. 1962

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System M.Ed. 1944

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in the North West Territories (1885-1905) and Alberta
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- McCALL, R.L. A History of the Rural High School in Alberta
M.Ed. 1956
- PATTERSON, R.S. F.W.G. Haultain and Education in the
Early West M.Ed. 1961
- PIERCE, H.L. An Ecological Analysis of the Schools in a
Small Canadian City: Camrose, Alberta M.Ed. 1964
- RABKIN, K.J. Public Education in Mexico M.Ed. 1950
- ROBERTSON, J.E. Some Administrative Problems Associated
with Literacy Work in Ethiopia M.Ed. 1960
- SELINGER, A.D. The Contributions of D.J. Goggin to the
Development of Education in the North-West Territories
(1893-1902) M.Ed. 1960
- SUGDEN, T.C. The Consolidated School Movement in Alberta
(1913-1963) M.Ed. 1964

B. Provincial Department Structure for Administration
and Supervision

Analysis of provincial department functions --
supervisory
curriculum
collection, analysis, and dissemination of
educational data

- COLLINS, C.P. The Role of the Provincially Appointed
Superintendent of Schools in Larger Units of Adminis-
tration in Canada Ph.D. 1958
- FINLAY, J.H. Expectations of School Boards for the Role
of the Provincially Appointed Superintendent of Schools
in Alberta M.Ed. 1961
- SAMPSON, L.P. A Survey of the Methods of Selection and
the Conditions of Employment of Provincially Employed
Superintendents and Inspectors of Schools in the
English Speaking Provinces of Canada Ph.D. 1965
- SHERK, H.G. The Expectations and Perceptions of Principals
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- SNELGROVE, V.J. A Study of the Administrative Role of the District Supervising Inspector in Newfoundland
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- STAFFORD, H.D. Expectations of School Trustees for the Role of the District Superintendent of Schools in British Columbia
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- THOMPSON, H. Leadership and the Provincial Superintendent
M.Ed. 1964

C. Administrative Units

D. Administrative Structure Within Local Districts

- HRYNYK, N.P. A Descriptive Survey of School Division Secretary-Treasurers
M.Ed. 1962
- MATSON, O.L. Conflict in the Executive Function of the Administration of the Large School Units of Alberta
M.Ed. 1964

E. The Place of the Intermediate Unit--Role of County or Divisional Superintendent

Status of the intermediate unit in Alberta
Sociological nature of rural life
The intermediate unit and potentiality for meeting district needs for special services
Responsibility for collection and analysis of school data--for appraisal and interpretation

- HENCLEY, S.P. A Descriptive Survey of the Alberta Divisional and County School Superintendent
M.Ed. 1958

- READY, L.M. The Preparation Needs of Superintendents in Large Administrative Units in Saskatchewan Ed.D. 1961
- STEWART, L.D. An Analysis of the Role of the Assistant Superintendent in Alberta School Divisions and Counties M.Ed. 1961

F. School Board Organization and Operation

Relative merits of elective and appointive school boards
Extent to which operation of schools is based on organized policy formation

- COOPER, W.M. An Investigation of Employer-Employee Relationships in Alberta School Jurisdictions M.Ed. 1966
- ENNS, F. The Legal Status of the Canadian Public School Board Ph.D. 1961
- HASTINGS, I. A Study of the Operations of School Boards in the Large Rural School Units in Alberta M.Ed. 1966
- McFETRIDGE, J.D. The Alberta Divisional School Trustee SILLITO, M.T. M.Ed. 1950
- McINNIS, W.R. A Descriptive Survey of the Organization, Functions and Operation of Collegiate Institute Boards in the Smaller Cities of Saskatchewan M.Ed. 1962
- MAERTZ, S.G. An Analysis of School Board Decisions in Selected Alberta Divisions and Counties M.Ed. 1966
- MOLYNEUX, A.K. A Description of Verbal Interaction Among Edmonton Public School Board Trustees and Officials M.Ed. 1965
- MYHRE, A.R. A Survey of Practices and Principles Involved in the Writing and Revision of School Board Policy Handbooks M.Ed. 1961
- ROEBOTHAN, C.W. A Study of the Operation of Anglican School Boards in Newfoundland M.Ed. 1962

G. Provisions for Post High School Instruction

Patterns of programs in Alberta and Canada
Relationship of post high school instruction
to migration pattern

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Problems of property tax administration

K. Effect of Bonding and Debenture Limitations

L. Expenditures and Size of Districts

Trend of total expenditures for public, elementary and secondary education in Alberta, 1905-1936-1965 (actual, and corrected for price changes)

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